

**MONOGRAPH  
OF  
CODE CHANGE SUBMITTALS FOR 2002**

**SUGGESTED REVISIONS  
TO THE  
CALIFORNIA BUILDING STANDARDS CODE**

**CODE ADVISORY COMMITTEE MEETINGS**

(Advisory committee meeting dates are subject to change)

**Access Committee Sept. 9, 2002**

**Building, Fire & Other Committee  
Sept. 10, 2002**

**Plumbing, Electrical, Mechanical & Energy  
Committee Sept. 12, 2002**

**Health Facilities Committee Sept. 16, 2002**

**Structural Design / Lateral Forces  
Committee Sept. 17, 2002**

**Stanley T. Nishimura, Executive Director  
California Building Standards Commission  
2525 Natomas Park Drive, Suite 130  
Sacramento, CA 95833  
(916) 263-0916**

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Tim Brink, Licensed Contractor  
Anthony Sauer, Public Member/Disabled  
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Vacant, Structural Engineer

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[A]

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## Preface

California Building Standards Law (Health and Safety Code §18929.1) requires state agencies that propose building standards for adoption in, amendment to, or repeal from the California Building Standards Code (Title 24, California Code of Regulations) to submit for consideration in an annual code adoption cycle. Further law requires proposed building standard and its justification to undergo a technical review by technical advisory committees of the California Building Standards Commission (CBSC). This document contains the proposed building standards that will be considered by technical advisory committees in the 2002 ANNUAL CODE ADOPTION CYCLE. In **Sept., 2002**, Technical Advisory Committees of the California Building Standards Commission will accept public comments, consider the technical merit of the proposed code changes, and recommend an action (approval, disapproval, approval as amended) to the commission.

Proposed building standards are listed in the Table of Contents, and are proposed by the California Building Standards Commission, the Department of Housing and Community Development, the Division of the State Architect, the Office of the State Fire Marshal, and the Office of Statewide Health Planning and Development.

The purpose of this document is to make available to the public the proposed code changes for comment and to ensure adequate public participation in its development. Should you choose to comment in opposition, support, or support with further amendments on any of the items contained in this document, you may comment at the meetings or in writing in advance of the code advisory committee meetings. A comment/challenge form is provided in this document for your convenience. The last day the commission will accept written comments on any item contained in this document is **Aug. 23, 2002**. Written Comments received by the deadline will be distributed to the appropriate advisory committee.

Address comments to:

Thomas L. Morrison, Deputy Director  
California Building Standards Commission  
2525 Natomas Park Drive, Suite 130  
Sacramento, CA 95833

JULY 2002

***Suggested Revisions to the California Building Standards Code  
California Code of Regulations  
Title 24  
(Submittals for 2002)***

**NOTE:** In order to follow the proposed revisions through the code change cycle, it is important to retain parts 1, 2, 3, 4, 5, & 9 of the California Building Standards Code.

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# Suggested Revisions to the California Building Standards Codes California Code of Regulations Title 24 (Submittals for 2002)

## Open Meetings - Where and When

This part of California Building Standards Code Monograph contains 2002 California proposed code changes to the Code. These changes will be considered by the Code Advisory committees, to which they have been referred, at public meetings, as indicated in the chart that follows:

### CBSC Code Advisory Committee Meetings

Note: Meetings may continue into a second day, and the order in which code changes are heard may change.

<p style="text-align: center;"><b>ACCESSIBILITY</b> Sept. 9, 2002 – 10:00 AM California Building Standards Commission 2525 Natomas Park Dr. 1<sup>st</sup> Floor Conference Rm. Sacramento, CA 95814</p>	<p style="text-align: center;"><b>BUILDING, FIRE &amp; OTHER</b> Sept. 10, 2002 – 10:00 AM California Building Standards Commission 2525 Natomas Park Dr. 1<sup>st</sup> Floor Council Rm. Sacramento, CA. 95833</p>
<p style="text-align: center;"><b>PLUMBING, ELECTRICAL, MECHANICAL &amp; ENERGY</b> Sept. 12, 2002 – 10:00 AM California Building Standards Commission 2525 Natomas Park Dr. 1<sup>st</sup> Floor Council Rm. Sacramento, CA. 95833</p>	<p style="text-align: center;"><b>STRUCTURAL DESIGN/LATERAL FORCES</b> Sept. 17, 2002 – 10:00 AM California Building Standards Commission 2525 Natomas Park Dr. 1<sup>st</sup> Floor Council Rm. Sacramento, CA. 95833</p>
<p style="text-align: center;"><b>HEALTH FACILITIES</b> Sept. 16, 2002 – 10:00 AM California Building Standards Commission 2525 Natomas Park Dr. 1<sup>st</sup> Floor Council Rm. Sacramento, CA. 95833</p>	

## Initial Statement of Reasons

The reasons for proposing this particular rulemaking action represent the opinion of the proposing or adopting State agency.

### Note:

The committee to which an item may be referred is subject to change. When such a change is necessary it will be shown on the committee's agenda. When a letter designation precedes the first number, the change is to the appropriate appendix of the code.

The following meeting facilities and restrooms are accessible to the physically disabled. Requests for accommodations for the disabled (assistive listening device, sign language interpreters, etc.) should be made to the Commission office no later than 10 working days prior to the day of the meeting. If Paratransit services are needed, they may be contacted at (916) 363-0661.

California Building Standards Commission  
2525 Natomas Park Drive, Suite 130  
Sacramento, CA. 95833

Parking is available on site at the Natomas Park Office Complex



## Identification of Changes

### Example of Code Change Submittal:

**ITEM 3** [BFO]  
**SFM 2/02**  
**Part 9**  
**Section 1006.2.7.1.1 & 1006.3.3.3.1**

In keeping with the established format, each code change is identified by an eight-part designation as follows:

<sup>(1)</sup>  
**ITEM 3** <sup>(2)</sup>  
**[BFO]**  
<sup>(3)</sup> <sup>(4)</sup> <sup>(5)</sup>  
**SFM 2/ 02-P**  
<sup>(6)</sup>  
**Part 9, Chapter 10**

<sup>(7)</sup> **Petition Note:**

<sup>(8)</sup> **Repeal or Amend Section 1006:**

The above reference would refer to an amendment of:

- <sup>(1)</sup> (Item Number) - Item 3 of the Code Advisory Committee agenda;
- <sup>(2)</sup> (Code Advisory Committee) - Committee to which the Item 3 is referred, the Building, Fire & Other [BFO];
- <sup>(3)</sup> (Proposing State Agency) - Proposing state agency initials, SFM;
- <sup>(4)</sup> (Submittal Number) - Second code change submitted, 2;
- <sup>(5)</sup> (Year Submitted) Submitted due to a Petition for 1999P;
- <sup>(6)</sup> (Part and/or Chapter or Article) - Chapter 10 affected;
- <sup>(7)</sup> (Petition Note, when applicable) - Note: indicating this code change is in response to a code change petition, identifying petitioner;
- <sup>(8)</sup> (Action Proposed by State Agency) - Proposed action to repeal section 1014.

## Express Terms Legend

- <sup>(1)</sup> California amendment (CA) brought forward **without** modification: *All language will appear in italics.*
- <sup>(2)</sup> California amendment (CA) brought forward **with** modification: *All language will appear in italics, modified language is shown underlined.*
- <sup>(3)</sup> Repealed text: Shown as ~~Strikeout~~.

## Legend of Proposing or Adopting State Agencies

CBSC -	California Building Standards Commission -- Thomas L. Morrison .....	(916) 263-0916
HCD -	Department of Housing and Community Development -- Chris Anderson .....	(916) 445-9471
DSA/AC -	Division of the State Architect -- Access Compliance Michael Mankin .....	(916) 445-5753
DSA/SS -	Division of the State Architect -- Structural Safety Richard Conrad.....	(916) 445-8100
OSHPD -	Office of Statewide Health Planning & Development -- Sue Botelho .....	(916) 654-2012
SFM -	State Fire Marshal -- Leslie Williams .....	(916) 445-8200

## Instructions for Presenting Comments

**For position of “Approve”, “Approve as Amended”, “Disapprove or Further Study”, comments must be restricted in terms of one or more of the following Nine-Point Criteria:**

1. Do the proposed building standards conflict with, overlap, or duplicate other building standards?
2. Are the proposed building standards within the parameters established by enabling legislation, and not expressly within the exclusive jurisdiction of another agency?
3. Does the public interest require the adoption of the building standards?
4. Are the proposed building standards unreasonable, arbitrary, unfair, or capricious, in whole or in part?
5. If there is a cost to the public, is it reasonably based on overall benefit to be derived from the building standards?
6. Are the proposed building standards in any way ambiguous or vague, in whole or in part?
7. Where appropriate, were applicable national specifications, published standards, and model codes incorporated therein as provided in this part?
8. Is the format of the building standards consistent with that adopted by the CBSC?
9. Is there written approval of proposed building standards from the State Fire Marshal, if the standards promote fire and panic safety as determined by the State Fire Marshal?

This information is provided voluntarily to facilitate this hearing under Government Code Section 11124, no person is required to register his or her name as a condition to attend a meeting of a state body.

**Should you wish to present your comment to an advisory committee, complete the form below for each item and submit to commission staff prior to the start of the advisory committee meeting. Additional forms will be available at the meetings.**

---

**State of California  
California Building Standards Commission**

**Item No.**

**Approve \_\_\_\_    Approved as Amended \_\_\_\_    Disapprove \_\_\_\_    Further Study**

**Criteria:    (1)    (2)    (3)    (4)    (5)    (6)    (7)    (8)    (9)**

**(circle one or more)**

**Name:** \_\_\_\_\_

**Telephone No:** (\_\_\_\_) \_\_\_\_\_

**Address:**

**City**

**State**

**Zip**

**Representing:**

**(Name of Organization or Group)**

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STATE OF CALIFORNIA  
STATE AND CONSUMER SERVICES AGENCY  
CALIFORNIA BUILDING STANDARDS COMMISSION  
2525 NATOMAS PARK DR., SUITE 130  
SACRAMENTO, CA 95833  
(916) 263-0916 Phone  
(916) 263-0959 Fax

Office Use Item No. \_\_\_\_\_

**PARTICIPATION COMMENTS**  
Challenge/comments should be sent to the above address.  
(SEE RULES FOR PUBLIC COMMENTS ON REVERSE SIDE)

**(WRITTEN COMMENT DEADLINE: Aug. 23, 2002)**

Date: \_\_\_\_\_

From: \_\_\_\_\_ Name (Print or type) \_\_\_\_\_ (Signature)

-- \_\_\_\_\_  
Agency, jurisdiction, chapter, company, association, individual, etc.

\_\_\_\_\_  
Street City State Zip

I/We (do)(do not) agree with:

☐ The Agency proposed modifications As Submitted on Item No. \_\_\_\_\_

and request that this item or reference provision be:

☐ Approved ☐ Disapproved ☐ Held for Further Study ☐ Approved as Amended

by the Commission.

**Reason:** [The reason should be concise; if the request is for "Disapproval", "Further Study", or "Approve As Amend" identify at least one of the 9-Point Criteria (see following pages) of Health & Safety Code §18930.]

## RULES OF PROCEDURES FOR PUBLIC COMMENTS

### SEC. 1-900. DEFINITIONS.

The following definitions govern the interpretation of this article.

- (a) **“Challenge”** means a written public comment received during a written comment period and directed at a proposed change or a code advisory committee recommendation or the procedures followed by the Commission in proposing or adopting the action.
- (b) **“Code advisory committee”** means an advisory panel or body appointed to advise the Commission with respect to building standards.
- (c) **“Code change”** means a proposed change to a building standard as defined by H&SC Section 18909.
- (d) **“Code change submittal”** means a proposed code change and its justification submitted to the Commission by a proposing agency.
- (e) **“Commission”** means the California Building Standards Commission.
- (f) **“Executive Director”** means the Executive Director of the California Building Standards Commission.
- (g) **“Justification”** means an initial statement of reason and the information needed to complete a notice of proposed action, including a determination as to the effect of the code change on housing costs.
- (h) **“Proposing agency”** means a state agency having authority and responsibility to propose a building standard for adoption by the Commission.
- (i) **“Special code advisory committee”** means an ad hoc committee established by the Commission, when necessary, to advise the Commission on a subject in the code needing extensive revision or on a complex subject which needs to be regulated or to perform a review of a proposed code change that warrants special technical review.
- (j) **“Technical review”** means a review of a proposed code change and its justification conducted pursuant to H&SC Section 18930©, (d), (e), (f) to ensure that a code change is justified in terms of criteria of H&SC Section 18930(a), the nine point criteria.

### SEC. 1-901. PROCEDURE FOR CODE ADOPTION PROCESS.

- (d) **Public Written Comment Period.** Anyone wishing to contest a recommendation of the code advisory committee(s) and/or comment on a proposed code change in the monograph may submit a challenge to the Commission during the written comment period established by the notice of proposed action. Upon written request received, no later than 15 days prior to the close of the written comment period, a public hearing pursuant to Government Code Section 11346.8 shall be held by the Commission on the proposed code changes, its justification and code advisory recommendations at which time statements, arguments, or comments, either oral or writing, or both shall be permitted.
  - (1) A challenge shall refer to a specific recommendation or proposed code change and clearly indicate what is being contested. The challenge shall specify the action desired: approve, disapprove, return for further study or approve as amended. A challenge shall specify a concise substantiating reason for the challenge.
  - (2) Following the close of the comment period and/or public hearing, the Commission shall make available to the public upon request a monograph of challenges received at the Commission office by the close of the written comment period and/or comments received at the public hearing.
  - (3) The Commission shall consider the challenges contained in the monograph.
  - (4) No new issues will be raised before the Commission that was not printed in the monograph of challenges.
  - (5) Items not challenged, but affected as a result of an action on another item, may also be considered at the Commission meeting to eliminate conflict, duplication, or overlap.

## HEALTH & SAFETY CODE SECTION 18930

### SECTION 18930. APPROVAL OR ADOPTION OF BUILDING STANDARDS; ANALYSIS AND CRITERIA; REVIEW CONSIDERATIONS; FACTUAL DETERMINATIONS

- (a) Any building standard adopted or proposed by state agencies shall be submitted to, and approved or adopted by, the California Building Standards Commission prior to codification. Prior to submission to the commission, building standards shall be adopted in compliance with the procedures specified in Article 5 (commencing with Section 11346) of Chapter 3.5 of Part 1 of Division 3 of Title 2 of the Government Code. Building standards adopted by state agencies and submitted to the commission for approval shall be accompanied by an analysis written by the adopting agency or state agency that proposes the building standards which shall, to the satisfaction of the commission, justify the approval thereof in terms of the following criteria:
- (1) The proposed building standards do not conflict with, overlap, or duplicate other building standards.
  - (2) The proposed building standard is within the parameters established by enabling legislation and is not expressly within the exclusive jurisdiction of another agency.
  - (3) The public interest requires the adoption of the building standards.
  - (4) The proposed building standard is not unreasonable, arbitrary, unfair, or capricious, in whole or in part.
  - (5) The cost to the public is reasonable, based on the overall benefit to be derived from the building standards.
  - (6) The proposed building standard is not unnecessarily ambiguous or vague, in whole or in part.
  - (7) The applicable national specifications, published standards, and model codes have been incorporated therein as provided in this part, where appropriate.
    - (A) If a national specification, published standard, or model code does not adequately address the goals of the state agency, a statement defining the inadequacy shall accompany the proposed building standard when submitted to the commission.
    - (B) If there is no national specification, published standard, or model code that is relevant to the proposed building standard, the state agency shall prepare a statement informing the commission and submit that statement with the proposed building standard.
  - (8) The format of the proposed building standards is consistent with that adopted by the commission.
  - (9) The proposed building standard, if it promotes fire and panic safety as determined by the State Fire Marshal, has the written approval of the State Fire Marshal.
- (b) In reviewing building standards submitted for its approval, the commission shall consider only the record of the proceedings of the adopting agency, except as provided in subdivision (b) of Section 11342.3 of the Government Code.
- (c) Where the commission is the adopting agency, it shall consider the record submitted to, and considered by, the state agency that proposes the building standards and the record of public comment that results from the commission's adoption of proposed regulations.
- (d) (1) The commission shall give great weight to the determinations and analysis of the adopting agency or state agency that proposes the building standards on each of the criteria for approval set forth in subdivision (a). Any factual determinations of the adopting agency or state agency that proposes the building standards shall be considered conclusive by the commission unless the commission specifically finds, and sets forth its reasoning in writing, that the factual determination is arbitrary and capricious or substantially unsupported by the evidence considered by the adopting agency or state agency that proposes the building standards.
- (2) Whenever the commission makes a finding, as described in this subdivision, it shall return the standard to the adopting agency or state agency that proposes the building standards for a reexamination of its original determination of the disputed fact.
- (e) Whenever a building standard is principally intended to protect the public health and safety, its adoption shall not be "factual determination" for purposes of subdivision (d). Whenever a building standard is principally intended to conserve energy or other natural resources, the commission shall consider or review the cost to the public or benefit to be derived as a "factual determination" pursuant to subdivision (d). Whenever a building standard promotes fire and panic safety, each agency shall, unless adopted by the State Fire Marshal, submit the building standard to the State Fire Marshal for prior approval.
- (f) Whenever the commission finds, pursuant to paragraph (2) of subdivision (a), that a building standard is adopted by an adopting agency pursuant to statutes requiring adoption of the building standard, the commission shall not consider or review whether the adoption is in the public interest pursuant to paragraph (3) of subdivision (a).

## INITIAL STATEMENT OF REASONS

### GENERAL – EXPRESS TERMS

The Administrative Procedure Act requires that an Initial Statement of Reasons be available to the public upon request, when rulemaking action is being undertaken. The following are the general reasons for proposing this particular rulemaking action:

**NOTE:** See individual code change items for specific State agency proposed modifications. Each item is followed with the specific reason (public problem, purpose, and necessity) for the particular code change.

Health and Safety Code Section 18929.1 requires the Commission to receive proposed building standards from state agencies for consideration in annual code adoption cycle. The Commission is task with responsibility of ensuring adequate participation in the development of building standards. Law requires technical advisory committees, appointed by the Commission, to review the technical merit of the proposed building standards prior to the Commission taking an action. Proposed building standards contained in this monograph will be reviewed by technical advisory committees on Sept. 9, 10, 12, 16, & 17 2002. (All committee dates are subject to change)

Health and Safety Code Sections 18949.1, 18949.2 and 18949.3, and 18949.5 transfers to the Commission the adoption responsibilities for building standards that proposed by four state agencies. The state agencies are the Division of the State Architect, the Office of the State Fire Marshal, the Office of Statewide Health Planning and Development and the Department of Housing and Community Development. Under the authority granted by these provisions of law, the Commission proposes to adopt, amend, repeal, carry forward, approve, codify, and publish building standards contained in the California Code of Regulations, Title 24, **Parts 1, 2, 3, 4, 5, and 9**, as presented in this monograph.

### THE CALIFORNIA BUILDING STANDARDS COMMISSION (CBSC)

Where no state agency has the authority, Health and Safety Code 18934.5 authorizes the California Building Standards Commission to adopt building standards. The building standards shall provide minimum standards for the design and construction of state buildings, buildings constructed by the Trustees of the California State University, and buildings constructed by the Regents of the University of California.

#### The CBSC proposed to:

- Adopt the 2002 edition of the National Electrical Code of the National Fire Protection Association for the above specified applications.

### THE DIVISION OF THE STATE ARCHITECT ACCESS COMPLIANCE (DSA/AC)

Government Code Section 4450 authorizes the Division of the State Architect the task of promulgating building standards that ensure barrier-free design in all buildings,

facilities, site work and other improvements specified by law.

The Division of the State Architect is further task with the responsibility to incorporate standards at least as restrictive as those required by the federal government for barrier-free design under:

- (3) Title III (Public Accommodations and Commercial Facilities), Sub-part D (New Construction and Alteration) and Appendix A (Americans with Disabilities Act Accessibility Guidelines) (see 28 C.F.R., Part 36) and
- (3) Title II (Public Entities), Section 35.151 (New Construction and Alterations) (see 28 C.F.R., Part 35) both from the Americans with Disabilities Act of 1990, and
- (3) Under the Fair Housing Amendments of 1988.

#### The DSA/AC proposes to:

- Adopt specific articles of the 2002 edition of the National Electrical Code of the National Fire Protection Association for the above specified applications.

### THE DIVISION OF THE STATE ARCHITECT STRUCTURAL SAFETY (DSA/SS)

Health and Safety Code Sections 16000 through 16023 provides the basis for the Division of the State Architect Structural Safety (DSA/SS) with authority to propose this regulatory action for compliance for application to essential services buildings. It is the intent of the Legislature that essential services buildings, which shall be capable of providing essential services to the public after a disaster, shall be designed and constructed to minimize fire hazards and to resist, insofar as practical, the forces generated by earthquakes, gravity, fire, and winds. It is also the intent of the Legislature that the structural systems and details set forth in working drawings and specifications be carefully reviewed by the responsible enforcement agencies using qualified personnel, and that the construction process be carefully and completely inspected. In order to accomplish these purposes, the Legislature intends to provide for the establishment of building standards for earthquake, gravity, fire, and wind resistance based upon current knowledge, and intends that procedures for the design and construction of essential services buildings be subjected to qualified design review and construction inspection.

It is further the intent of the Legislature that the nonstructural components vital to the operation of essential services buildings shall also be able to resist, insofar as practical, the forces generated by earthquakes, gravity, fire, and winds. The Legislature recognized that certain nonstructural components housed in essential services buildings, including, but not limited to, communications systems, main transformers and switching equipment, and emergency backup systems, are essential to facility operations and that these nonstructural components should be given adequate consideration during the design and construction process to assure, insofar as practical, continued operation of the building after a disaster.

Existing Education Code (Ed.C.) Sections 17280 through 17316 provides the basis for the Department of General Services (DGS), DSASS with the authority to propose this regulatory action for application to public schools. The DSA shall supervise the design and construction of any school building, reconstruction or alteration to ensure that the plans

and specification comply with the adopted rules, regulations and building standards published in Title 24, California Code of Regulations (CCR). The DSA shall also ensure the work of construction has been performed in accordance with the approved plans and specifications for the protection of life and property.

Existing Ed.C. Section 81130 through 81149 provides the basis for the DGS, DSA/SS with authority to propose this regulatory for application to community colleges. The DSA shall supervise the design and construction of any school building to ensure that plans and specifications comply with building standards published in Title 24, CCR. The DSA shall also ensure the work of construction has been performed in accordance with the approved plans and specifications for the protection of life and property.

**The DSA/SS proposes to:**

- Adopt the 2002 National Electrical Code of the National Fire Protection Association for the above-specified applications.
- Amend various sections of Part 1, 2001 California Administrative Code for the above-specified applications.
- Amend various sections of Part 2, 2001 California Building Code for the above-specified applications.

**THE OFFICE OF STATE FIRE MARSHAL (SFM)**

Existing law authorizes the State Fire Marshal to propose building standards for adoption by the Commission for specified applications. The citations of laws and its application are as follows:

**Application**—Any building or structure used or intended for use as an asylum, jail, mental hospital, hospital, sanitarium, home for the aged, children's nursery, children's home, school or any similar occupancy of any capacity.

Any theater, dance hall, skating rink, auditorium, assembly hall, meeting hall, nightclub, fair building, or similar place of assemblage where 50 or more persons may gather together in a building, room or structure for the purpose of amusement, entertainment, instruction, deliberation, worship, drinking or dining, awaiting transportation, or education.

Any building or structure which is open to the public and is used or intended to be used for the showing of motion pictures when an admission fee is charged and when the building or structure has a capacity of 10 or more persons.  
**Authority Cited**—H&SC § 13143.

**Application**—Single Family Day-care Homes.  
**Authority Cited**—H&SC §1597.45, 1597.54, 13143 and 17921.

**Application**—Large Family Day-care Homes.  
**Authority Cited**—H&SC §1597.46, 1597.54, and 17921.

**Application**—Residential Facilities and Residential Facilities for the Elderly.  
**Authority Cited**—H&SC §13133.

**Application**—Any state institution or other state-owned or state-occupied building.  
**Authority Cited**—H&SC §13108.

**Application**—High-rise Structures.  
**Authority Cited**—H&SC §13211.

**Application**—Organized Camps.  
**Authority Cited**—H&SC §18897.3.

**Application**—All hotels, motels, lodging houses, apartment houses and dwellings, including congregate residences and buildings and structures accessory thereto.

Multiple-story structures existing on January 1, 1975, let for human habitation, including and limited to, hotels motels, apartment houses, less than 75 feet above the lowest floor level having building access, wherein rooms used for sleeping are let above the ground floor.  
**Authority Cited**—H&SC §13143.2 and 17921.

**Application**—Certified family-care homes, out-of-home placement facilities, halfway houses, drug and/or alcohol rehabilitation facilities and any building or structure used or intended for use as a home or institution for the housing of any person of any age when such person is referred to or placed within such home or institution for protective social care or supervision services by any governmental agency.  
**Authority Cited**—H&SC §13143.6.

**Application**—Tents, awnings or other fabric enclosures used in connection with any occupancy.  
**Authority Cited**—H&SC §13116.

**The SFM proposes to:**

- Adopt the 2002 National Electrical Code of the National Fire Protection Association for the above-specified applications.
- Amend various sections of Part 2, 2001 California Building Code for the above-specified applications.
- Amend various sections of Part 9, 2001 California Fire Code for the above-specified applications.

**THE OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT**

Existing law which commences with Section 15000 of Chapter 1, Division 12.5, Health and Safety Code (Alfred E. Alquist Hospital Facilities Seismic Safety Act of 1983) was enacted on January 1, 1983 by Chapter 303, Statutes of 1982 (Senate Bill 961, Alquist). The provisions of the Act grants to the Office of Statewide Health Planning and Development the authority to establish proper building standards to carry out its provisions, and preempt from local jurisdiction the enforcement of all building standards relating to health facilities as defined by the Act – hospitals and multistory nursing facilities (OSHDP 1), single story wood frame type V nursing facilities (OSHDP 2), and correctional treatment facilities (OSHDP 4). Responsibilities of the Office include the plan checking and the inspection of the design and construction of the architectural, structural, electrical, mechanical, and plumbing systems. This responsibility also includes the enforcement of fire and life safety requirements adopted by the State Fire Marshal and Accessibility for Disabled Persons standard as adopted by the Division of State Architect Accessibility Section.

Health and Safety Code Section 1226 grants the Office of Statewide Health Planning and Development the authority to



prescribe minimum construction standards of adequacy and safety for the physical plant of licensed clinics (OSHDP 3).

The specific purpose of the California Building Standards Code is to provide protection to life and property by regulating the design, construction and reconstruction of hospital buildings, skilled nursing facilities, intermediate care facilities and clinic buildings. This proposal for adoption is authorized pursuant to Sections 446.2, 446.3, 1226, 1275 and Sections 15000 through 15093 of the Health and Safety Code.

**The OSHPD proposes to:**

- Adopt the 2002 National Electrical Code of the National Fire Protection Association for the above-specified applications.
- Amend various sections of Part 1, 2001 California Administrative Code for the above-specified applications.
- Amend various sections of Part 2, 2001 California Building Code for the above-specified applications.
- Amend various sections of Part 4, 2001 California Mechanical Code for the above-specified applications.
- Amend various sections of Part 5, 2001 California Plumbing Code for the above-specified applications.

**DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT (HCD)**

Health and Safety Code Section 17922 of the State Housing Law and 19990 of the Factory-Built Housing Law, directs the Department of Housing and Community Development to propose the adoption of building standards which are substantially the same as the most recent edition of the National Electrical Code of the National Fire Protection Association.

Health and Safety Code Section 17921 of the State Housing Law; Health and Safety Code Section 17040 of the Employee Housing Act; and Health and Safety Code Sections 18300, 18620, 18640, and 18670 of the Mobilehome Parks Act directs the Department of Housing and Community Development to propose the adoption amendment or repeal of building standards.

**The HCD propose to:**

- Adopt the 2002 National Electrical Code of the National Fire Protection Association with necessary amendments.

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**Part 1**  
**California Building Standards**  
**Administrative Code**

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## EXPRESS TERMS

### Chapter 4

#### 4-309. Reconstruction or Alteration Projects in Excess of \$25,000 in Cost.

(a) **General.** Plans and specifications for any reconstruction or alteration project exceeding \$25,000 in cost shall be submitted to DSA for approval in accordance with Section 4-315, except as provided within this section. The cost of work classified as maintenance as defined in Section 4-314 shall not be considered for purposes of this section. When the estimated cost of a reconstruction or alteration project exceeds \$25,000 but does not exceed \$100,000, and a licensed structural engineer determines that the project does not include any work of a structural nature, approval of the project plans and specifications by DSA is not required, provided the following three items are completed:

1. The structural engineer shall submit a written statement to DSA, indicating that the project does not contain any work of a structural nature.
2. The design professional in general responsible charge of the project shall certify, in writing, that the plans and specifications for the project meet any applicable fire and life-safety standards, and do not specify any work of construction that is regulated by the accessibility standards of Title 24. This certification shall be submitted to DSA, and shall bear the stamp and signature of the design professional.
3. Within 10 days of the completion of the project, a DSA-certified project inspector shall sign and submit a verified report to DSA, indicating that the project was completed in conformance with the plans and specifications. (See Section 4-336 Verified Reports).

School construction projects shall not be subdivided for the purpose of evading the cost limitations of this section.

All new construction work which is part of a reconstruction or alteration project shall comply with currently effective regulations.

**EXCEPTION:** Fire damage repair may be accomplished utilizing the approved plans and specifications for the original construction work. All regulations and standards in effect at the time of approval shall be complied with except that the testing and inspection requirements of current regulations shall apply to the reconstruction work.

Minor modifications to the original approved plans may be made, subject to the approval of DSA, provided that they do not reduce the structural capacity of the building.

Minor structural modifications to the existing structural system not exceeding the limits defined in Section 4-309 (c) 2 A and B are permitted provided these modifications comply with the regulations in effect when the plans and specifications for the original construction were approved.

#### (b) Existing Non-complying Nonstructural Elements.

Existing non-complying nonstructural elements discovered during the design or construction of a reconstruction, alteration or addition to an existing complying school building and directly affected by the work of construction shall be corrected to comply with the bracing and anchorage requirements of currently effective regulations.

(c) **Required Structural Rehabilitation.** Existing school buildings for which a reconstruction, alteration or addition project is proposed shall be retrofitted as required to conform to currently effective regulations, under the following conditions:

1. When the cost of the reconstruction, alteration, or addition project exceeds \$25,000 and 50 percent of the replacement value of the existing building. Maintenance work and air-conditioning equipment and insulation materials costs need not be included in the percentage of replacement value calculation. For purposes of this section, the cost of the reconstruction, alteration, or addition project shall not include the cost of structural rehabilitation.
2. When the cost of the reconstruction, alterations, or addition project exceeds \$25,000 but does not exceed 50 percent of the replacement value of the existing building and the proposed modifications, either:
  - A. Increase the existing lateral force story shear in any story by more than 5 percent, or
  - B. Reduce the lateral-force-resisting capacity in any story or in the total building by no less than 5 percent.

**EXCEPTION:** Rehabilitation of the building is not required under Section 4-309 (c) 2 (A) when the lateral story shear design load requirements under which the building was originally certified is greater than the lateral seismic load for the altered building under currently effective regulations.

(d) **Other Requirements.** Individual lines of lateral force-resisting elements which are to be altered or which are to be affected by other modifications shall be analyzed to determine the effects of increased loading and/or reduced capacity. The analysis shall show that the affected portion of the structure complies with Section 4-309 (a) or (c) as appropriate.

(e) When structural damage due to an earthquake is repaired, all portions of the structure associated to this damage shall be retrofitted to comply with currently effective regulations.

Authority: Education Code Sections 17310 and 81142.  
Reference: Education Code Sections 17280, 17294, 81130, 81132 and 81133.

## **INITIAL STATEMENT OF REASONS**

### **STATEMENT OF SPECIFIC PURPOSE AND RATIONALE.**

4-309. Reconstruction or Alteration Projects in Excess of \$25,000 in Cost.

The proposed amendments would bring Section 4-309 into conformance with the intent of Education Code Sections 17280 and 17295, regarding the scope of work that is to be included in the project's estimated cost of construction.

### **TECHNICAL, THEORETICAL, AND EMPIRICAL STUDY, REPORT, OR SIMILAR DOCUMENTS.**

None required for this editorial change.

### **CONSIDERATION OF REASONABLE ALTERNATIVES.**

Proposed action consists of editorial change, so no alternatives have been considered.

### **REASONABLE ALTERNATIVES THE AGENCY HAS IDENTIFIED THAT WOULD LESSEN ANY ADVERSE IMPACT ON SMALL BUSINESS.**

The Division of the State Architect did not identify any reasonable alternatives to the proposed regulations.

### **FACTS, EVIDENCE, DOCUMENTS, TESTIMONY, OR OTHER EVIDENCE OF NO SIGNIFICANT ADVERSE ECONOMIC IMPACT ON BUSINESS.**

None required, as no adverse effect on business was determined on the basis that the proposed amendments are editorial.

### **ESTIMATE OF COST OR SAVINGS**

- ◆ Cost or Savings to any state agency: **NO**
- ◆ Cost to any local agency required to be reimbursed under Part 7 (commencing with Section 17500) of Division 4: **NO**
- ◆ Cost to any school district required to be reimbursed under Part 7 (commencing with Section 17500) of Division 4: **NO**
- ◆ Other nondiscretionary cost or savings imposed on local agencies: **NO**

- ◆ Cost or savings in federal funding to the state: **NO**

### **INITIAL DETERMINATION OF NO SIGNIFICANT STATEWIDE ADVERSE ECONOMIC IMPACT ON BUSINESSES**

The Division of the State Architect has made an initial determination that the amendment of these regulations will not have a significant statewide adverse economic impact on businesses, including the ability of California businesses to compete with business in other states.

### **DECLARATION OF EVIDENCE**

No facts, evidence, documents, testimony or other evidence has been relied upon to support the initial determination of no effect.

### **FINDING OF NECESSITY FOR THE PUBLIC'S HEALTH, SAFETY, OR WELFARE**

The proposed action does not require a report by any business or agency, so the Division of the State Architect has not made a finding of necessity for public's health, safety or welfare.

### **COST IMPACT ON REPRESENTATIVE PRIVATE PERSON OR BUSINESS**

The Division of the State Architect is not aware of any cost impacts that a representative private person or business would necessarily incur in reasonable compliance with the proposed action.

### **ASSESSMENT OF EFFECT OF REGULATIONS UPON JOBS AND BUSINESS EXPANSION, ELIMINATION OR CREATION**

The Division of the State Architect has assessed whether or not and to what extent this proposal will affect the following:

- ◆ The creation or elimination of jobs within the State of California.  
The Division of the State Architect has determined that the proposed action has no effect.
- ◆ The creation of new businesses or the elimination of existing businesses within the State of California.  
The Division of the State Architect has determined that this proposal has no effect.
- ◆ The expansion of businesses currently doing business with the State of California.  
The Division of the State Architect has determined that the proposed action has no effect.

### **INITIAL DETERMINATION OF SIGNIFICANT EFFECT ON HOUSING COSTS**

The Division of the State Architect has made an initial determination that this proposal WOULD NOT have a significant effect on housing costs. The CBSC contact

designated below will make the Division of the State Architect's evaluation of the effect of the proposed regulatory action on housing costs available upon request.

**STAFF FINDINGS**

None

**ITEM 1 – Committee Recommendations**

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**ITEM 2** [HF]  
**OSHPD 4/02**  
**Part 1**  
**Section 7-125, 7-129, 7-135, 7-141, 7-155,**  
**7-203, 7-2100, 7-2101, 7-2102, 7-2103, 7-2104,**  
**7-2105 & 7-2106**

**Chapter 7. Safety Standards for Health Facilities**  
**Article 3. Approval of Plans and Specifications**

**ITEM 2-1**

**7-125. Final Review of Plans and Specifications.**

....

(d) After the Office has made its check of the submitted documents ....

(e) ~~Before the Office's written approval of the plans and specifications is issued, a set of prints of the stamped plans and specifications must be submitted to the Office. The architect or engineer shall submit to the Office a set of plans and specifications bearing the identification stamp of the Office. Upon receipt of this set, the Office shall provide written approval of the plans and specifications.~~

Any changes made to the approved plans or specifications shall be made in accordance with Section 7-153. Any unapproved change, erasure, alteration or modification of any plan or specification bearing the identification stamp of the Office shall void the approval of the application. However, the written approval of plans may be extended to include revised and/or additional plans and specifications after submission for review and approval thereof.

**ITEM 2-1 – Committee Recommendations**

A AA D FS

\* \* \*  
**(END OF ITEM)**

**ITEM 2-2**

**7-129. Time Limitations for Approval**

Final plans and specifications shall be submitted to the Office ....

The procedures leading to obtaining written approval of final plans ....

(c) Construction, in accordance with approved plans and specifications, shall commence within one year after obtaining the written approvals of plans and specifications provided in Section 7-135(a), or this approval shall become void. The Office may require that the plans and specifications be revised to meet current regulations before reinstating a voided approval.

Notation

Authority: Health and Safety Code Section 129850.

Reference(s): Health and Safety Code Sections 129675-130070.

**ITEM 2-2 – Committee Recommendations**

A AA D FS

\* \* \*  
**(END OF ITEM)**

**ITEM 2-3**

**Chapter 7. Safety Standards for Health Facilities**  
**Article 4. Construction**

**7-135. Time of Beginning Construction.**

(a) Construction shall not commence until the health facility has applied for and obtained from the Office:

1. Written approval of the plans and specifications.
2. A building permit.
3. Written approval of the ~~inspector of record testing, inspection and observation program.~~

(b) Construction shall not commence until the health facility has complied with the Infection Control Program provisions of Title 22, Section 70739 (b).

Notation

Authority: Health & Safety Code Section 129850

Reference(s): Health & Safety Code Sections 129675 - 130070

**ITEM 2-3 – Committee Recommendations**

A      AA      D      FS

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(END OF ITEM)

#### ITEM 2-4

##### 7-141. Administration of Construction

....

(f) The ~~testing~~ inspection program shall include a completed application for inspector(s) of record for the project. If a project has more than one inspector of record, the distribution of responsibilities for the work shall be clearly identified for each inspector of record. The inspection program shall also identify all special inspections to be performed on the project and the individual(s) to perform the inspections. The special inspections shall include, at a minimum, those special inspections required be applicable sections of the California Building Standards Code.

....

Notation

Authority: Health & Safety Code Section 129850

Reference(s): Health & Safety Code Sections 129675 - 130070

#### ITEM 2-4 – Committee Recommendations

A      AA      D      FS

\*   \*   \*  
(END OF ITEM)

#### ITEM 2-5

##### 7-155. Final Approval of the Work.

(a) The Office shall schedule a final state agency inspection of the work subsequent to the receipt of the responsible architect's or engineer's statement that the contract is performed or substantially performed.

(b) The final approval of the construction shall be issued by the Office when:

1. All work has been completed in accordance with the approved plans and specifications.

2. The required verified compliance reports and test and inspection ~~affidavits~~ reports have been filed with the Office.

3. All remaining fees have been paid to the Office.

Notation

Authority: Health & Safety Code Sections 129850

Reference(s): Health & Safety Code Sections 129675-130070

#### ITEM 2-5 – Committee Recommendations

A      AA      D      FS

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(END OF ITEM)

#### ITEM 2-6

##### Chapter 7. Safety Standards for Health Facilities

##### Article 19. Certification & Approval of Hospital Inspectors

##### 7-203. Applying for the Certification Examination.

(a) An applicant may apply for the Hospital Inspector Certification Exam by submitting, to the Office, the following items prior to the final filing date announced for a scheduled exam:

1. A completed original application, provided by the Office, shall be submitted to the Office in Sacramento and shall include the exam title, preferred examination location, applicant's name, mailing address and telephone number.

2. Certificates, ~~affidavits~~, or transcripts indicating educational courses completed by the applicant which relate to the minimum qualifying requirements stated in Section 7-204.

3. Work verification form ....

Notation

Authority: Health & Safety Code Sections 129825 and 129850

Reference(s): Health & Safety Code Sections 129825 and 129850

## ITEM 2-6 – Committee Recommendations

A      AA      D      FS

\* \* \*  
(END OF ITEM)

## ITEM 2-7

### Chapter 7. Safety Standards for Health Facilities Article 21. Plan Review, Building Inspection and Certification of Surgical Clinics, Chronic Dialysis Clinics and Outpatient Services Clinics

#### 7-2100. Scope of Responsibilities.

(a) Except as otherwise provided in these regulations, a city or county building jurisdiction shall be responsible for plan review, building inspection and certification of new construction or alteration of clinic facilities specified in (a) (1), (2) ~~and (3)~~ and (4) and for buildings converted to the purpose specified in (a) (1), (2) ~~or (3)~~ or (4).

1. Surgical clinic as defined in Health and Safety Code, Section 1204(b)(1).

2. Chronic dialysis clinic as defined in Health and Safety Code, Section 1204(b)(2).

3. Surgical and/or chronic dialysis clinic building which is freestanding from a building where hospital services are provided and as defined in Health and Safety Code, Section 129725(b)(1).

4. Any building where hospital outpatient clinical services are provided that is separated from a hospital building, as defined in Health and Safety Code, Section 129725(a), except those buildings identified in 7-2100(a) (3) above.

(b) The city or county shall not establish or apply building standards for the construction or alteration of hospital licensed freestanding clinics, as described in Section 7-2100(a) (3), which are more restrictive or comprehensive than comparable building standards established or applied to clinic facilities which are not hospital licensed pursuant to Health and Safety Code, Chapter 1 (commencing with Section 1200) of Division

2.

#### 7-2101. Surgical Clinic and Chronic Dialysis Clinic Project Submittal to the Local Building Jurisdiction.

(a) The governing authority or owner of a clinic, as described in Section 7-2100(a)(1) and (2), shall submit construction plans to the city or county, as applicable, for plan review, building inspection and certification. Certification by the local building jurisdiction shall indicate that the project clinic is in conformance with the applicable clinic standards, as propounded by the office, in provisions in the latest edition of the California Building Standards Code.

**EXCEPTION:** Notwithstanding Section 7-2100(a)(1) and (2), the governing authority or owner may request the Office to perform the plan review and certification, pursuant to Section 7-2102.

(b) Upon the clinic's initial submittal of project plans, the city or county shall advise the governing authority or owner, in writing, of its decision that plan review services will either include certification or not include certification.

(c) If the city or county indicates to the governing authority or owner that it will include certification with plan review of the specified clinic project, the city or county shall:

1. Review plans to all applicable clinic provisions of in the latest edition of the California Building Standards Code and;

2. Provide written certification to the applicant within 30 days of completion of construction that indicating whether or not the applicable building clinic provisions standards have been met.

(d) If the city or county indicates to the applicant that it will not include certification with plan review of the specified clinic project, the city or county shall review the plans to the provisions of the latest edition of the California Building Standards Code, excluding the clinic provisions. ~~†The governing authority or owner shall also submit the following items to the Office for plan review and certification:~~

1. A completed application, design plans and specifications for the clinic project, pursuant to Section 7-113, and;

2. A fee, pursuant to Section 7-2106.

(e) The Office shall review the plans and specifications to determine whether or not the clinic project meets the applicable clinic provisions in the latest edition of the California Building Standards Code.

~~(e)~~ (f) Upon completion of plan review and submittal of all applicable fees, the Office shall provide the clinic applicant with written certification that the project design plans and specifications ~~either meet or do not meet the applicable standards, as propounded by the Office, in clinic provisions in the latest edition of the California Building Standards Code.~~

(g) Building construction inspection for the clinic project shall be performed by the local jurisdiction.

#### **7-2102. Request for the Office to Provide Plan Review for Surgical Clinics and Chronic Dialysis Clinics.**

(a) If the ~~hospital~~ governing authority or owner of a clinic, as described in Section 7-2100(a) ~~(1) and (2)~~, elects to request the Office to provide plan review services for a clinic project, in lieu of the city or county, the request shall be submitted to the Office in writing. The Office will consult with the applicable local building jurisdiction prior to acceptance or non-acceptance of the plan review request and subsequently notify the clinic, in writing, of its decision.

(b) If the Office agrees to provide plan review and certification services for the governing authority or owner, the applicant shall submit the following items to the Office:

1. A completed application, design plans and specifications for the clinic project, pursuant Section 7-113, and;

2. A fee, pursuant to Section 7-2106.

(c) The Office shall review the plans to all applicable provisions in the latest edition of the California Building Standards Code.

~~(e)~~ (d) Upon completion of plan review and submittal of all applicable fees, the Office shall provide the applicant with written certification that the project design plans and specifications ~~either meet or do not meet the latest applicable standards, as propounded by the Office, in the California Building Standards Code.~~

~~(d)~~ (e) Building construction inspection for the project clinic shall be performed by the local building jurisdiction. ~~Therefore, the governing authority or owner shall submit to the city or county applicable project documents required for these building inspection services.~~

#### **7-2103. Outpatient Services Clinic Project Submittal to Local Building Jurisdiction.**

(a) The hospital governing authority or owner of a

freestanding outpatient services clinic, as described in Section 7-2100(a) ~~(3) or (4)~~, shall submit construction plans to the city or county, as applicable, for plan review, building inspection and certification, pursuant to this section or may request the Office to perform plan review, and building inspection and certification, pursuant to Section 7-2104. ~~Certification by the local building jurisdiction shall indicate that the project clinic is in conformance with the applicable clinic standards, as propounded by the Office, in the California Building Standards Code.~~

(b) If the hospital governing authority or owner of a clinic, as described in Section 7-2100(a) ~~(3)~~, initially submits clinic plans to the city or county for plan review, the city or county shall respond to the clinic owner, in writing, stating its decision of whether or not the plan review will include certification.

(c) If the city or county indicates to the hospital governing authority or owner that it will include certification with plan review of the specified clinic project, the city or county shall:

1. Review plans to ~~latest all applicable clinic provisions, as amended by the Office, in the latest edition of the California Building Standards Code and;~~

2. Provide written certification to the applicant within 30 days of completion of construction ~~that indicating whether or not the applicable building clinic provisions standards have been met.~~

(d) If the city or county indicates to the hospital governing authority or owner that it will not include certification with plan review of the specified clinic project, the city or county shall review the plans to the provisions of the latest edition of the California Building Standards Code, excluding the clinic provisions. ~~The applicant shall also submit the following items to the Office for plan review and certification:~~

1. A completed application, design plans and specifications for the clinic project, pursuant to Section 7-113, and;

2. A fee, pursuant to Section 7-2106.

(e) The Office shall review the plans and specifications for certification to determine whether or not the clinic project meets the applicable clinic provisions in the latest edition of the California Building Standards Code

~~(e)~~ (f) Upon completion of plan review and submittal of all applicable fees, the Office shall provide the clinic applicant with certification that the project design plans and specifications ~~either meet or do not meet the applicable standards, as propounded by the Office, in the latest edition of the California~~

Building Standards Code.

~~(f) (g)~~ Building construction inspection for the project clinic shall be performed by the local building jurisdiction, ~~therefore, the governing authority or owner shall submit to the city or county applicable project documents required for these building inspection services.~~

#### **7-2104. Plan Review and Building Inspection by the Office for Outpatient Services Clinics.**

(a) If the hospital governing authority or owner of a clinic, as described in Section 7-2100(a)(3) ~~or (4)~~, requests that the Office perform plan review and building inspection for a clinic project, in lieu of the city or county performing these services, the request shall be submitted to the Office in writing. The Office will provide a written response to the hospital indicating the decision to provide or not provide the requested services. If the Office does not agree to provide plan review and building inspection, ~~as requested~~, the city or county shall conduct these services.

(b) Upon the Office's acceptance to provide plan review and building inspection for a clinic project, the hospital governing authority or owner shall submit the following items to the Office:

1. A completed application, design plans and specifications for the clinic project, pursuant to Section 7-113 and;
2. A fee, pursuant to Section 7-2106.

(c) Upon completion of the building construction and submittal of all applicable fees, the Office will provide certification that the plans and construction comply with the applicable provisions in the California Building Standards Code, ~~including model code provisions~~

(d) A clinic building which has been accepted by the Office, pursuant to paragraph (a) of this section, shall remain under the jurisdiction of the Office for plan review and building inspection of any subsequent alterations, unless the hospital governing authority or owner submits written notification to the Office, requesting the applicable city or county building jurisdiction to conduct plan review and building inspection for subsequent construction projects of the specified clinic.

#### **7-2105. "Hospital Building" Designation of a Freestanding Hospital-owned Clinic.**

(a) A building which is under the Office's jurisdiction, pursuant to Section 7-2104(d) may be designated as a "hospital building" by the hospital governing authority or owner under the following conditions:

1. The hospital governing authority or owner submits written notification to the Office indicating the determination to designate the building as a "hospital building" and;

2. The subject building remains under the jurisdiction of the Office for plan review and building inspection.

(b) A building designated as a "hospital building," pursuant to Section 7-2105(a), shall be reviewed and inspected ~~to verify in compliance with the standards and requirements for a hospital building, as defined in~~ Health and Safety Code, Part 7, Chapter 1, (commencing with Section 129675).

#### **7-2106. Fees for Review of Specified Clinics.**

(a) Fees for plan review services of clinic buildings described in Section 7-2100(a)(1), (2) and (3), shall be in an amount not to exceed the actual cost of performing the services.

**EXCEPTION:** When the Office accepts a request from the hospital governing authority or owner to perform plan review and building inspection services for those buildings described in Section 7-2100(a)(3), the fee requirements of Section 7-133 (a)(1) which apply to hospital buildings shall also apply to the project building.

(b) Fees shall be paid as follows:

1. A non-refundable deposit of \$250.00 shall accompany the application for plan review.

2. After a preliminary review of the required documents received and determination of the services to be performed, the Office will provide an estimate of the total review fee due based on costs to be incurred.

3. The applicant shall submit payment of the estimated fee prior to start of the plan review and building inspection services.

4. If during the review/inspection process it appears that actual costs will exceed the estimate by more than five percent (5%), the applicant will be informed that additional fees, not to exceed the actual cost will be due and payable immediately upon project completion.

5. All applicable fees for a completed project shall be paid prior to certification by the Office.

(c) Fees received for a project, which are in excess of five percent (5%) of the actual cost for performing plan review and inspection services, will be refunded by the Office.

Notation

Authority: Health & Safety Code Section 129850

Reference(s): Health & Safety Code Sections 1226, 129785 and 129885

#### ITEM 2-7 – Committee Recommendations

A	AA	D	FS

\* \* \*

(END OF ITEM)

### INITIAL STATEMENT OF REASONS

#### SUBJECT: REVISIONS TO CLINIC PROVISIONS AND VARIOUS EDITORIAL/TECHNICAL CHANGES

The Administrative Procedure Act (APA) requires that an Initial Statement of Reasons be available to the public upon request when rulemaking action is being undertaken. The following information required by the APA pertains to this particular rulemaking action:

#### STATEMENT OF SPECIFIC PURPOSE AND RATIONALE:

##### Chapter 7, Sections 7-125 (e) and 7-129 (c)

**Purpose:** The proposed amendments clarify the requirements for obtaining health facility construction plan approval from the Office of Statewide Health Planning and Development (OSHPD) and the timeframe for which that approval remains effective. Current regulation is confusing and ambiguous regarding when the one-year period begins, after which the plan approval becomes void. Section 7-129(c) states that "construction ... shall commence within one year after obtaining the written approvals provided in section 7-135(a), or this approval shall become void." There are three separate approvals in 7-135(a): 1) written approval of plans and specifications, 2) building permit, and 3) approval of the inspector of record (IOR). It is not stated if the one-year interval begins when the first of the three items is approved, or when the approval of all three items is completed. There is nothing that ties the approval of the IOR or the building permit to any other part of the plan approval process. These milestones are open-ended and do not establish any time limit for approval.

**Rationale:** The proposed amendments are necessary to add clarification to the existing requirements.

#### Chapter 7, Section 7-135

**Purpose:** Section 1-135 requires that approval of specific documents be obtained by OSHPD prior to commencement of health facility construction. The proposed amendment informs the facility that another requirement in Title 22 must be met prior to construction. The amendment will provide a reference to Title 22, Section 70739 (b) which requires that a health facility's infection control committee provide advice on all proposed health facility construction. This Title 22 regulation is enforced by Department of Health Services, Licensing and Certification.

An editorial change was also made to Section 7-135(a)3. A previous revision to this chapter changed the requirement for approval of the inspector of record to approval of a testing, inspection and observation program. This amendment updates the terminology in this section to coordinate with this change.

**Rationale:** This amendment in Title 24, Part 1 is necessary to inform the designer that there is a provision in Title 22 which is enforced by an entity other than OSHPD and that it needs to be complied with prior to commencement of health facility construction. Other editorial changes for coordination purposes.

#### Chapter 7, Section 7-141

**Purpose:** This proposal corrects a typographical error that was made when this section was substantially revised. The text refers to the "testing program." This should have read "inspection program."

**Rationale:** Nonsubstantial, editorial change to correct a typographical error.

#### Chapter 7, Sections 7-155 (b)(2) and 7-203 (a) (2)

**Purpose:** The proposed amendments will repeal the word "affidavit" to eliminate terminology that is incorrectly used within the two provisions. The term "affidavit" is being replaced in Section 7-155 (b) (2) with the term "report" which is descriptive of the type of documents that need to be filed with the Office. Also, in Section 7-203 (a) (2) the term "affidavit" is being repealed because this type of legal document is not necessary for proof of an individuals training and education when applying for a Hospital Inspector of Record Examination.

**Rationale:** The word "affidavit" is inappropriate terminology as used in these two sections, therefore, it is being repealed.

#### Chapter 7, Sections 7-2100, 7-2101, 7-2102, 7-2103, 7-2104, 7-2105 and 7-2106

**Purpose:** The provisions regarding plan review, building inspection and certification for chronic dialysis clinics,

surgical clinics and outpatient services clinics are being amended to provide clarification. The amendments will clarify the regulations with regard to the roles of the local building jurisdiction and OSHPD in the plan review and certification process for licensed clinics. Additionally, this proposal includes a few editorial amendments.

**Rationale:** The Office has received inquiries from individuals expressing their confusion over which building jurisdiction is responsible for plan review, building inspection and certification of clinic construction. The amendments will provide consistent language throughout these provisions and will make the requirements more clear.

#### **TECHNICAL, THEORETICAL, AND EMPIRICAL STUDY, REPORT, OR SIMILAR DOCUMENTS:**

There are no technical, theoretical or empirical studies or documents to be identified regarding the development of these proposed regulations.

#### **CONSIDERATION OF REASONABLE ALTERNATIVES**

There were no alternatives to be considered by the Office. The proposed regulations are meant to provide clarification of the existing provisions.

#### **REASONABLE ALTERNATIVES THE AGENCY HAS IDENTIFIED THAT WOULD LESSEN ANY ADVERSE IMPACT ON SMALL BUSINESS.**

These proposed regulations will not adversely impact small businesses.

#### **FACTS, EVIDENCE, DOCUMENTS, TESTIMONY, OR OTHER EVIDENCE OF NO SIGNIFICANT ADVERSE IMPACT ON BUSINESS.**

The scope of the proposed changes is to clarify existing regulations and make minor editorial and technical modifications, with no substantial changes to the regulations. The OSHPD has not relied on any other facts, evidence, documents, testimony, or other evidence to make its initial determination of no significant adverse impact on businesses.

#### **ESTIMATE OF COST OR SAVINGS**

- ◆ Cost or Savings to any state agency: **None**
- ◆ Cost to any local agency required to be reimbursed under Part 7(commencing with Section 17500) of Division 4: **None**
- ◆ Cost to any school district required to be reimbursed under Part 7 (commencing with Section 17500) of Division 4: **None**
- ◆ Other nondiscretionary cost or savings imposed on local agencies: **None**
- ◆ Cost or savings in federal funding to the state: **None**

Estimate: The proposed regulatory action is for editorial and clarification purposes, and will not result in a cost or savings.

#### **INITIAL DETERMINATION OF NO SIGNIFICANT STATEWIDE ADVERSE ECONOMIC IMPACT ON BUSINESSES**

The OSHPD has made an initial determination that the adoption/amendment/repeal of this regulation will not have a significant statewide adverse economic impact on businesses, including the ability of California businesses to compete with business in other states.

#### **DECLARATION OF EVIDENCE**

The scope of the proposed changes is to clarify existing regulations and make minor editorial modifications, with no substantial changes to the regulations, and therefore no economic impact. The OSHPD has not relied on any other facts, evidence, documents, testimony, or other evidence to make its initial determination of no statewide adverse economic impact on businesses.

#### **FINDING OF NECESSITY FOR THE PUBLIC'S HEALTH, SAFETY, OR WELFARE**

Identification of findings is not applicable to this proposal.

#### **COST IMPACT ON REPRESENTATIVE PRIVATE PERSON OR BUSINESS**

The OSHPD is not aware of any cost impacts that a representative private person or business would necessarily incur in reasonable compliance with the proposed action.

#### **ASSESSMENT OF EFFECT OF REGULATIONS UPON JOBS AND BUSINESS EXPANSION, ELIMINATION OR CREATION**

The OSHPD has assessed whether or not and to what extent this proposal will affect the following:

- ◆ The creation or elimination of jobs within the State of California.

The proposed action would have no effect on the creation or elimination of jobs within the state of California.

- ◆ The creation of new businesses or the elimination of existing businesses within the State of California.

The proposed action would have no effect on the

creation of new businesses or elimination of existing businesses within the state of California.

- ♦ The expansion of businesses currently doing business with the State of California.

The proposed action would have no effect on the expansion of businesses currently doing business with the state of California.

#### **INITIAL DETERMINATION OF SIGNIFICANT EFFECT ON HOUSING COSTS**

The OSHPD has made an initial determination that this proposal would not have an effect on housing costs.

#### **STAFF FINDINGS**

None



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## **Part 2**

# **California Building Code**

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## EXPRESS TERMS

{The California Building Standards Commission has continued the use of the 1998 California Building Code (CBC), as based on the 1997 Uniform Building Code with the intent of republishing such code as the 2001 CBC.

The SFM is proposing to amend an existing SFM amendment as published in the 2001 CBC. The proposed language shown below will prohibit patient treatment room doors from swinging into the required width of corridors. The existing text of the 2001 CBC prohibits patient sleeping room doors from swinging into the required clear width of corridors.}

### Chapter 10 – Means of Egress

#### SECTION 1007.5—Group I Occupancies

**1007.5.11 [For SFM] Swing of patient room doors.**  
*Entrance doors to patients' bedrooms and treatment rooms from corridors of Group I, Divisions 1.1 and 1.2 Occupancies shall not swing into the required width of corridors.*

Authority Cited-Health and Safety Code Section 13143.  
Reference-Health and Safety Code Section 13143(a).

## INITIAL STATEMENT OF REASONS

### STATEMENT OF SPECIFIC PURPOSE AND RATIONALE FOR THE PROPOSED AMENDMENT TO THE CBC- SECTION 1007.5.11:

The specific purpose of this rulemaking effort as a whole is as follows:

- ❖ The proposed language revises an existing State of California amendment to coordinate with a model code revision to exception 3 of section 1007.5.4 which allows door closers to be omitted from patient treatment room doors opening onto corridors when such rooms are located in fully sprinkled buildings.
- ❖ The proposed language will prohibit patient treatment room doors from swinging into the required width of corridors. Existing language prohibits patient sleeping room doors from swinging into the required width of corridors.

- ❖ When door closers are omitted from doors opening into the required width of corridors, the resulting condition can be hazardous, functionally unworkable and inconvenient for patients and staff. These doors can create dangerous obstructions when relocating or evacuating patients. The minimum required width of the corridor is reduced since the door does not automatically swing closed. When emergency relocation of patients on beds, litters or gurneys becomes necessary, these doors make the movement of such patients problematic. Doors opening into corridors limit access to handrails that are provided in many areas of health care occupancies for use by patients.

The actions described above are reasonably necessary to carry out the purpose for which it is proposed. The rationale for these actions is to establish minimum requirements for the prevention of fire and for the protection of life and property against fire and panic in any building or structure used or intended for use as a hospital, hospital, home for the elderly, or any similar occupancy of any capacity.

### TECHNICAL, THEORETICAL, AND EMPIRICAL STUDY, REPORT, OR SIMILAR DOCUMENTS:

The SFM did not rely on any technical, theoretical, and empirical study, report, or similar document for the development of the proposed amendment to this existing regulation.

### CONSIDERATION OF REASONABLE ALTERNATIVES:

#### Alternatives Considered:

1. Amend the model code standard that would require door closers on treatment room doors was considered.

**Reason for Rejection:** This alternative would not be consistent with other model building codes. Requiring closers on these doors would interfere with day-to-day operations of health facility staff. It would also require an additional State of California amendment. The proposed change amends an existing State of California amendment.

2. Limit the size of treatment room doors without door closers to a maximum width of 36" was considered.

**Reason for Rejection:** These doors would still open into the required clear width of the corridor and would still be loose when left open.

3. Require a hold open device on doors without door closers was considered.

**Reason for Rejection:** This alternative could require the owner to incur unexpected expenses in order to comply with the regulation. Additionally, this alternative would not address the concern of these door's encroachment onto handrails that are located on the other side of the door and these doors would still impede the space needed when patients are being moved.

The SFM has determined that no alternative considered would be more effective in carrying out the purpose for which the amendment to the existing regulation is proposed or would be as effective and less burdensome to affected private persons than the adopted regulation.

**REASONABLE ALTERNATIVES THE AGENCY HAS IDENTIFIED THAT WOULD LESSEN ANY ADVERSE IMPACT ON SMALL BUSINESS:**

The SFM has determined that this proposed amendment will not have an adverse impact on small business. Therefore, no alternatives have been identified or that have otherwise been identified and brought to the attention of the SFM that would lessen any adverse impact on small business.

**FACTS, EVIDENCE, DOCUMENTS, TESTIMONY, OR OTHER EVIDENCE OF NO SIGNIFICANT ADVERSE IMPACT ON BUSINESS:**

The SFM has made an initial determination that the proposed action will not have significant adverse impact on business

**DUPLICATION OR CONFLICTS WITH FEDERAL REGULATIONS:**

The SFM has determined that this proposed rulemaking action does not unnecessary duplicate or conflict with federal regulations contained in the Code of Federal Regulations that address the same issues as this proposed rulemaking.

**ESTIMATE OF COST OR SAVINGS**

- ◆ Cost or Savings to any state agency: None
- ◆ Cost to any local agency required to be reimbursed under Part 7(commencing with Section 17500) of

Division 4: None

- ◆ Cost to any school district required to be reimbursed under Part 7 (commencing with Section 17500) of Division 4: None
- ◆ Other nondiscretionary cost or savings imposed on local agencies: None
- ◆ Cost or savings in federal funding to the state: None

Estimate: The proposed action will not result in a cost or savings.

**INITIAL DETERMINATION OF NO SIGNIFICANT STATEWIDE ADVERSE ECONOMIC IMPACT ON BUSINESSES**

The State Fire Marshal has made an initial determination that this proposed amendment to the CBC would not have a significant statewide adverse economic impact on businesses, including the ability of California businesses to compete with business in other states.

**DECLARATION OF EVIDENCE**

The State Fire Marshal has not relied on any facts, evidence, documents, testimony, or other evidence to make its initial determination of no statewide adverse economic impact on businesses.

**FINDING OF NECESSITY FOR THE PUBLIC'S HEALTH, SAFETY, OR WELFARE**

The SFM has determined that this proposed amendment would not require a report; therefore, a finding is not necessary for the health, safety, or welfare of the people of the state that the regulation is applicable to businesses.

**COST IMPACT ON REPRESENTATIVE PRIVATE PERSON OR BUSINESS**

The State Fire Marshal is not aware of any cost impacts that a representative private person or business would necessarily incur in reasonable compliance with the proposed action.

**ASSESSMENT OF EFFECT OF REGULATIONS UPON JOBS AND BUSINESS EXPANSION, ELIMINATION OR CREATION**

The State Fire Marshal has assessed whether or not and to what extent this proposal will affect the following:

- ◆ The creation or elimination of jobs within the State of California.

These regulations will have no effect on the creation or elimination of jobs within the State of

California.

- ◆ The creation of new businesses or the elimination of existing businesses within the State of California.

These regulations will have no effect on the creation of new businesses or the elimination of existing business within the State of California.

- ◆ The expansion of businesses currently doing business with the State of California.

These regulations will have no effect on the expansion of businesses currently doing business with the State of California.

#### **INITIAL DETERMINATION OF SIGNIFICANT EFFECT ON HOUSING COSTS**

The State Fire Marshal has made an initial determination that this proposal would not have an effect on housing costs.

#### **STAFF FINDINGS**

None

#### **ITEM 3 – Committee Recommendations**

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(END OF ITEM)

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## EXPRESS TERMS

### SUB-ITEM 4-1

**Section 1627A** - Amend Section 1627A as follows:

#### SECTION 1627A - DEFINITIONS

For the purposes of this division, certain terms are defined as follows:

....

**INCIDENTAL STRUCTURAL ALTERATIONS OR ADDITIONS** are alterations or additions which would not reduce the story lateral shear force-resisting capacity by more than 5 percent or increase the story shear by more than 5 percent in any existing story.

....

**IRREGULAR STRUCTURE** is a structure designated as having one or more plan or vertical irregularities.

....

**LATERAL-FORCE-RESISTING SYSTEM** is that part of the structural system designed to resist the Design Seismic Forces.

....

#### ITEM 4-1 – Committee Recommendations

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\* \* \*  
 (END OF ITEM)

### SUB-ITEM 4-2

**Section 1629A.8** - Amend Section 1629A.8 as follows:

#### 1629A.8 Selection of Lateral-force Procedure.

**1629A.8.1 General.** Any structure may be, and certain structures defined below shall be, designed using the dynamic lateral- force procedures of Section 1631A.

....

**1629A.8.3 Static.** The static lateral force procedure of Section 1630A may be used for the following structures:

1. Not adopted by ~~the State of California~~ DSA.

2. Regular structures under 240 feet (73 152 mm) in height with lateral force resistance provided by systems listed in Table 16A-N, except where Section 1629A.8.4, Item 4, applies.

3. Irregular structures *with flexible diaphragms not more than three stories or 30 feet (9144 mm) in height.*

4. Structures having a flexible upper portion supported on a rigid lower portion where both portions of the structure considered separately can be classified as being regular, the average story stiffness of the lower portion is at least 10 times the average story stiffness of the upper portion and the period of the entire structure is not greater than 1.1 times the period of the upper portion considered as a separate structure fixed at the base.

5. Wood-frame structures having wood shear walls and wood diaphragms.

6. Irregular structures with reentrant corners, plan irregularity Type 2, Table 16A-M, which are otherwise eligible for static analysis.

**1629A.8.4 Dynamic.** The dynamic lateral-force procedure of Section 1631A shall be used for all other structures, including the following:

1. Structures 240 feet (73 152 mm) or more in height.

2. Structures having a ~~stiffness, weight or geometric~~ plan or vertical irregularity of Type 1, 2 or 3, as defined in Table 16A-L or 16A-M, or structures having irregular features not described in Table 16A-L or 16A-M, except as permitted by Section 1629A.8.3 and Section 1630A.4.2.

3. Structures over five stories or 65 feet (19 812 mm) in height in Seismic Zones 3 and 4 not having the same structural system throughout their height except as permitted by Section 1630A.4.2.

4. Structures, regular or irregular, *except those defined in Section 1629A.8.3, Items 3 and 5, located on Soil Profile Type  $S_F$ , that have a period greater than 0.5 second as calculated in accordance with Method B in Section 1630A.2.2.* The analysis shall include the effects of the soils at the site and shall conform to Section 1631A.2, Item 4.

....

#### ITEM 4-2 – Committee Recommendations

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\* \* \*

(END OF ITEM)

#### SUB-ITEM 4-3

**Section 1629A.9** - Amend Section 1629A.9 as follows:

##### 1629A.9 System Limitations.

**1629A.9.1 Discontinuity.** Structures with a discontinuity in capacity, vertical irregularity Type 5 as defined in Table 16A-L, are not permitted, shall not be over two stories or 30 feet (9144 mm) in height where the weak story has a calculated strength of less than 65 percent of the story above.

**EXCEPTION:** Where the weak story is capable of resisting a total lateral seismic force of  $S_o$  times the design force prescribed in Section 1630A.

....

##### 1629A.9.2 Undefined structural systems....

##### 1629A.9.3 Irregular features....

**1629A.9.4 Severe Soft Story.** *Structures with a Severe Soft Story vertical irregularity Type 1b, as defined in Table 16A-L, are not permitted.*

**1629A.9.5 Severe torsional irregularity.** *Structures with a severe torsional irregularity, plan irregularity Type 1b, as defined in Table 16A-M are not permitted.*

....

#### ITEM 4-3 – Committee Recommendations

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\* \* \*

(END OF ITEM)

#### SUB-ITEM 4-4

**Section 1630A.2.2** - Amend Section 1630A.2.2 as follows:

**1630A.2.2 Structure Period.** The value of  $T$  shall be

determined from one of the following methods:

1. Method A: For all buildings, the value of  $T$  may be approximated from the following formula:

$$T_A = C_t (h_n)^{3/4} \quad T_A = \frac{C_t (h_n)^{3/4}}{IN_v}$$

(30A-8)

WHERE:

....

#### ITEM 4-4 – Committee Recommendations

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\* \* \*

(END OF ITEM)

#### SUB-ITEM 4-5

**Section 1630A.4** - Amend Section 1630A.4 as follows:

##### 1630A.4 Combinations of Structural Systems.

....

**1630A.4.1 General.** Where combinations of structural systems are incorporated into the same structure, the requirements of this section shall be satisfied.

**1630A.4.2 Vertical combinations.** The value of  $R$  used in the design of any story shall be less than or equal to the value of  $R$  used in the given direction for the story above.

**EXCEPTION:** This requirement need not be applied to a story where the dead weight above that story is less than 10 percent of the total dead weight of the structure.

Structures may be designed using the procedures of this section under the following conditions:

1. The entire structure is designed using the lowest  $R$  of the lateral-force-resisting systems used, or

2. ~~The following two~~ Two-stage static analysis procedures may be used ~~for structures conforming to Section 1629A.8.3, Item 4.~~ providing the structure complies with the following:

2.1 The flexible upper portion shall be designed as a

separate structure, supported laterally by the rigid lower portion, using the appropriate values of *R* and *D*.

2.2 The rigid lower portion shall be designed as a separate structure using the appropriate values of *R* and *D*. The reactions from the upper portion shall be those determined from the analysis of the upper portion amplified by the ratio of the (*R*/*Δ*) of the upper portion over (*R*/*Δ*) of the lower portion. This ratio shall not be less than one.

2.3 Where design of elements of the upper portion are governed by special seismic loads, the special loads shall be considered in the design of the lower portion.

2.4 The lower portion shall have a stiffness at least 10 times the upper portion.

2.5 The period of the entire structure shall not be greater than 1.1 times the period of the upper portion considered as a separate structure fixed at the base.

2.6 The detailing requirements required by the lateral system of the upper portion shall be used for structural components common to the structural system of lower portion.

2.7 If separate models are used to design the upper and lower portions, the model boundary conditions of the upper portion shall be compatible with actual strength and stiffness of the supporting elements of the lower portion.

....

**ITEM 4-5 – Committee Recommendations**

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* * *			
(END OF ITEM)			

**SUB-ITEM 4-6**

**Section 1630A.7** - Amend Section 1630A.7 as follows:

**1630A.7 Horizontal Torsional Moments.** Provisions shall be made for the increased shears resulting from horizontal torsion where diaphragms are not flexible. The most severe load combination for each element shall be considered for design.

....

Where torsional irregularity exists, as defined in Table 16A-M, the effects shall be accounted for by increasing the accidental torsion at each level by an amplification factor, *A<sub>x</sub>*, determined from the following formula:

$$A_x = \left[ \frac{\Delta_{max}}{1.2\Delta_{avg}} \right]^2$$

(30A-16)

WHERE:

*Δ<sub>avg</sub>* = the average of the interstory drift at the extreme points of the structure at Level *x*.

*Δ<sub>max</sub>* = the maximum interstory drift at Level *x*.

....

**ITEM 4-6 – Committee Recommendations**

A	AA	D	FS
* * *			
(END OF ITEM)			

**SUB-ITEM 4-7**

**Section 1631A.3** - Amend Section 1631A.3 as follows:

**1631A.3 Mathematical Model.** A mathematical model of the physical structure shall represent the spatial distribution of the mass and stiffness of the structure to an extent that is adequate for the calculation of the significant features of its dynamic response. A three-dimensional model shall be used for the dynamic analysis of structures with highly irregular plan configurations such as those having a plan irregularity defined in Table 16A-M and having a rigid or semi rigid diaphragm. The stiffness properties used in the analysis and general mathematical modeling shall be in accordance with Section 1630A.1.2. The mathematical model of buildings with diaphragm discontinuities, as defined in Table 16-M, shall explicitly include the effect of diaphragm stiffness.

**ITEM 4-7 – Committee Recommendations**

A	AA	D	FS
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(END OF ITEM)

#### SUB-ITEM 4-8

**Section 1631A.5.4** - Amend Section 1631A.5.4 as follows:

**1631A.5.4 Reduction of Elastic Response Parameters for design.** Elastic Response Parameters may be reduced for purposes of design in accordance with the following items, with the limitation that in no case shall the Elastic Response Parameters be reduced such that the corresponding design base shear is less than the Elastic Response Base Shear divided by the value of  $R$  or the values of  $V_{sc}$  defined in Item 4.

1. For all regular structures, \* \* \* Elastic Response Parameters may be reduced such that the corresponding design base shear is not less than 100 percent of the base shear determined in accordance with Section 1630A.2.

~~2. Not adopted by the State of California.~~

2. For irregular structures with vertical irregularity Types 1a, 2, or 5, as defined in Table 16A-L, Elastic Response Parameters, may be reduced such that the corresponding design base shear is not less than 125 percent of the base shear determined in accordance with Section 1630A.2.

**Exception:** The Elastic Response Parameters for structures with Vertical Irregularity Types 1a or 2 as defined in Table 16A-L may be reduced such that the corresponding design base shear is not less than 100 percent of the base shear determined in accordance with Section 1630A.2, if no interstory drift ratio under design lateral load is greater than 130 percent of the story drift ratio of the interstory immediately above. Torsional effects need not be considered in the calculation of story drifts for the purposes of this determination. The story drift ratio relationships for the top two stories of the structures are not required to be evaluated.

3. For all irregular structures, \* \* \* Elastic Response Parameters may be reduced such that the corresponding design base shear is not less than 125 percent of the base shear determined in accordance with Section 1630A.2.

3. For all other structures, Elastic Response Parameters may be reduced such that the

corresponding design base shear is not less than 100 percent of the base shear determined in accordance with Section 1630A.2.

~~4. The base shear  $V_{sc}$  is determined from the following formula:~~

$$V_{sc} = \frac{V(SR)}{(31A-1)}$$

**WHERE:**

~~$SR$  = the spectral ratio determined by the following formula:~~

$$SR = \frac{\sum_{m=1}^n (MPE_m PM_m)}{\sum_{m=1}^n (CBC_m PM_m)} \quad (31A-2)$$

~~$V$  = the total design base shear calculated in accordance with Formula (30A-4).~~

**WHERE:**

~~$CBC_m$  = spectral acceleration determined from the design response spectrum given in Figure 16A-3 for the appropriate soil type at the period of the  $m$ th mode.~~

~~$MPE_m$  = spectral acceleration of the site-specific maximum probable earthquake spectrum (5 percent damping) at the period of the  $m$ th mode. The value of  $MPE_m$  need not exceed 1.5.~~

~~$n$  = number of significant modes required for at~~

~~least 90 percent of the total building mass to~~

~~participate in the direction of interest.~~

~~$PM_m$  = fraction of total building mass participating in the  $m$ th mode in the direction of interest.~~

~~The design base shear shall not be taken as less than  $V_{sc}$ , unless justification is provided to substantiate a level of safety equivalent to structural designs at other sites and meeting the requirements of Section 1631A.2, Item 6.~~

The corresponding reduced design seismic forces shall be used for design in accordance with Section 1612A.

#### ITEM 4-8 – Committee Recommendations

A	AA	D	FS
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\* \* \*  
(END OF ITEM)

#### SUB-ITEM 4-9

**Section 1632A.6** - Amend Section 1632A.2.6 as follows:

**1632A.6 HVAC Ductwork, Plumbing/Piping and Conduit Systems.** All pipes, ducts and conduit shall be braced to resist the forces prescribed in Section ~~1630A.2.~~ 1632A. Ductwork shall be constructed in accordance with provisions contained in Part 4, Title 24, California Mechanical Code. Pipes and their connections constructed of ductile materials (copper, ductile iron, steel or aluminum) with brazed or welded connections shall have brace spacing not exceeding that specified in Section ~~1630A.5~~ 1632A.5 or other standards approved by the enforcement agency. Pipes and their connections, constructed of nonductile materials (e.g., cast iron, no-hub pipe and plastic) or with screwed connections, shall have the brace spacing reduced to one-half of the spacing allowed for ductile material in accordance with Section ~~1630A.5~~ 1632A.5 or other standards approved by the enforcement agency.

Seismic restraints may be omitted for the following conditions, where flexible connections are provided between components and the associated ductwork, piping, and conduit:

1. Fuel piping less than 1 inch (25 mm) inside diameter.
2. All other piping less than 2.5 inches (64 mm) diameter, ~~except medical gas including vacuum piping,~~ or

All piping suspended by individual hangers 12 inches (305 mm) or less in length from the top of the pipe to the bottom of the structural support for the hanger. Rod hangers shall not be constructed in a manner that would subject the rod to bending moments. or

All electrical conduit less than 2.5 inches (64 mm) trade size.

3. All rectangular air-handling ducts less than 6 square feet (0.56 m<sup>2</sup>) in cross-sectional area, or

All round air-handling ducts less than 28 inches (711 mm) in diameter, or

All ducts suspended by hangers 12 inches (305 mm) or less in length from the top of the duct to the bottom of the structural support for the hanger, where the hangers are detailed to avoid bending of the hangers and their connections.

Where lateral restraints are omitted, the piping, ducts, or

conduit shall be installed such that lateral motion of the piping, ~~or duct,~~ or conduit will not cause damaging impact with other systems or structural members, or loss of vertical support.

....

#### ITEM 4-9 – Committee Recommendations

A	AA	D	FS

\* \* \*  
(END OF ITEM)

#### SUB-ITEM 4-10

**Section 1633A.1** - Amend Section 1633A.1 as follows:

**1633A.1 General.** All structural framing systems shall comply with the requirements of Section 1629A. Only the elements of the designated seismic-force-resisting system shall be used to resist design forces. The individual components shall be designed to resist the prescribed design seismic forces acting on them. The components shall also comply with the specific requirements for the material contained in Chapters 19A through 23A. In addition, such framing systems and components shall comply with the detailed system design requirements contained in Section 1633A.

All building components in Seismic Zones 3 and 4 shall be designed to resist the effects of the seismic forces prescribed herein and the effects of gravity loadings from dead, floor live and snow loads.

Consideration shall be given to design for uplift effects caused by seismic loads.

In Seismic Zones 3 and 4, provision shall be made for the effects of earthquake forces acting in a direction other than the principal axes in each of the following circumstances:

The structure has plan irregularity Type 5 as given in Table 16A-M.

The structure has plan irregularity Type 1<sub>a</sub> as given in Table 16A-M for both major axes.

A column of a structure forms part of two or more intersecting lateral-force-resisting systems. For the purposes of this Section, a shear wall boundary element is considered to be equivalent to a column.

**EXCEPTION:** If the axial load in the column due to

The requirement that orthogonal effects be considered may be satisfied by designing such elements for 100 percent of the prescribed design seismic forces in one direction plus 30 percent of the prescribed design seismic forces in the perpendicular direction. The combination requiring the greater component strength shall be used for design. Alternatively, the effects of the two orthogonal directions may be combined on a square root of the sum of the squares (SRSS) basis. When the SRSS method of combining directional effects is used, each term computed shall be assigned the sign that will result in the most conservative result.

**A      AA      D      FS**

\* \* \*

(END OF ITEM)

*Retainer plates are required for both car and counterweight, designed in accordance with Section 3032 (c), Part 7, Title 24, California Code of Regulations. Retainer plates are required at the top and bottom of the car and counterweight, except where safety devices acceptable to the enforcement agency are provided which meet all requirements of the retainer plates, including full engagement of the machined portion of the rail. The design of the car and counterweight guide rails for seismic forces shall be based on the following requirements:*

**6. Cab stabilizers and counterweight frames shall be designed to withstand a lateral load equal to  $0.5g$  using allowable stress design**

**A      AA      D      FS**

\* \* \*

(END OF ITEM)

**TABLE 16A-L—VERTICAL STRUCTURAL  
IRREGULARITIES**

IRREGULARITY TYPE AND DEFINITION	REFERENCE SECTION
<p><b>1a. Stiffness irregularity-soft story</b></p> <p>A soft story is one in which the lateral stiffness is less than 70 percent of that in the story above or less than 80 percent of the average stiffness of the three stories above.</p>	<p>1629A.8.4, Item 2</p>
<p><b><u>1b. Severe Soft Story</u></b></p> <p><u>A severe soft story is one in which the lateral stiffness is less than 60 percent of that in the story above or less than 70 percent of the average stiffness of three stories above.</u></p>	<p><u>1629A.8.4, Item 2</u> <u>1629A.9.4</u></p>

<p><b>2. Weight (mass) irregularity</b> Mass irregularity shall be considered to exist where the effective mass of any story is more than 150 percent of the effective mass of an adjacent story. A roof that is lighter than the floor below need not be considered.</p>	1629A.8.4, Item 2
<p><b>3. Vertical geometric irregularity</b> Vertical geometric irregularity shall be considered to exist where the horizontal dimension of the lateral-force-resisting system in any story is more than 130 percent of that in an adjacent story. One-story penthouses need not be considered.</p>	1629A.8.4, Item 2
<p><b>4. In-plane discontinuity in vertical lateral-force-resisting element</b> An in-plane offset of the lateral-load-resisting elements <del>greater than</del> <u>not within</u> the length of <del>those the</del> elements <u>below</u>.</p>	1630A.8.2
<p><b>5. Discontinuity in capacity-weak story</b> A weak story is one in which the <i>ratio of the story strength to the story shear is less than 80 percent of that in the story above. The story strength is the strength of all seismic-resisting elements sharing the story shear for the direction under consideration. The load deformation characteristics of the elements shall be considered so that the</i></p>	1629A.9.1

strength is determined for compatible deformations.	
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#### ITEM 4-12 – Committee Recommendations

A	AA	D	FS
* * *			
(END OF ITEM)			

#### SUB-ITEM 4-13

Table 16A-M-Amend Table 16A-M as follows:

**TABLE 16A-M—PLAN STRUCTURAL IRREGULARITIES**

IRREGULARITY TYPE AND DEFINITION	REFERENCE SECTION
<p><b>1a. Torsional irregularity-to be considered when diaphragms are not flexible</b> Torsional irregularity shall be considered to exist when the maximum story drift, computed including accidental torsion, at one end of the structure transverse to an axis is more than 1.2 times the average of the story drifts of the two ends of the structure.</p>	1633A.1 1633A.2.9, Item 6
<p><b>1b. Severe Torsional irregularity-to be considered when diaphragms are not flexible</b> <u>Torsional irregularity shall be considered to exist when the maximum story drift, computed including accidental torsion, at one end of the structure transverse to an axis is more than 1.4 times the average of the story drifts of the two ends of the structure.</u></p>	<u>1629A.9.5</u> <u>1631B.2.9,</u> <u>Item 6</u>
<b>2. Reentrant corners</b>	1633A.2.9,

Plan configurations of a structure and its lateral force-resisting system contain reentrant corners, where both projections of the structure beyond a reentrant corner are greater than 15 percent of the plan dimension of the structure in the given direction.	Items 6 and 7
<b>3. Diaphragm discontinuity</b> Diaphragms with abrupt discontinuities or variations in stiffness, including those having cutout or open areas greater than 50 percent of the gross enclosed area of the diaphragm, or changes in effective diaphragm stiffness of more than 50 percent from one story to the next.	1633A.2.9, Item 6
<b>4. Out-of-plane offsets</b> Discontinuities in a lateral force path, such as out-of-plane offsets of the vertical elements.	1630A.8.2; 1633A.2.9, Item 6; 2213A.9.1
<b>5. Nonparallel systems</b> The vertical lateral load-resisting elements are not parallel to or symmetric about the major orthogonal axes of the lateral force-resisting system.	1633A.1

#### ITEM 4-13 – Committee Recommendations

A      AA      D      FS

\*   \*   \*

(END OF ITEM)

#### SUB-ITEM 4-14

Section 2210A - Amend Section 2210A as follows:

#### SECTION 2210A - ADOPTION

*Except for the modifications as set forth in Section 2211A of this Division and the requirements of the building code, the seismic design, fabrication, and erection of structural steel shall be in accordance with the Seismic Provisions for Structural Steel Buildings, April 15, 1997 published by the American Institute of Steel Construction, 1 East Wacker Drive, Suite 3100, Chicago, IL 60601, including Supplement No. 42 dated*

~~February 15, 1999~~ November 10, 2000.

#### ITEM 4-14 – Committee Recommendations

A      AA      D      FS

\*   \*   \*

(END OF ITEM)

#### SUB-ITEM 4-15

Section 2211A - Amend Section 2211A as follows:

#### SECTION 2211A - AMENDMENTS

*The Seismic Provisions for Structural Steel Buildings, hereinafter referred to as AISC Seismic 97, shall include only Part I (LRFD) and Appendix S. Where other codes, standards, or specifications are referred to in AISC Seismic 97 they are considered as supplemental standards and only considered guidelines subject to the approval of the enforcement agency.*

#### 1. Part I, Glossary. Add the following:

Inelastic Rotation of Beam-to-Column Connection: The total angle change between the column face at the connection and a line connecting the beam inflection point to the column face, less that part of the angle change occurring prior to yield of the beam.

Rapid Strength Deterioration: A mode of behavior characterized by a sudden loss of strength. In a cyclic test with constant or increasing deformation amplitude, a loss of strength of more than 50 percent of the strength attained in the previous excursion in the same loading direction.

**2. Part I, Glossary. Ordinary, and Intermediate, and Special Truss Moment Frame (OMF, and IMF and STMF).**

#### 3. Part I, Section 7.3c amend this section to read as follows:

For members and connections that are part of the Seismic Force Resisting System, discontinuities located within a plastic hinging zone as defined in Section 7.4a, created by errors or by fabrication or erection operations, such as tack welds, erection aids, air-arc gouging, and thermal cutting, shall be repaired as required by the Engineer of Record and approved by DSA.

**34. Part I, Section 9.2 amend to read as the following:**

**9.2. Beam-to-Column Joints and Connections**

**9.2a.** The design of all beam-to-column joints and connections used in the Seismic Force Resisting System shall be based upon qualifying cyclic test results in accordance with Appendix S that demonstrate an interstory drift angle of at least 0.04 radians and an inelastic rotation of at least 0.03 radians. Qualifying test results shall consist of at least three cyclic tests shall be based upon one of the following requirements:

....

**4.5. Part I, Section 10. Intermediate Moment Frames (IMF) including Commentary Section C10.**

**5.6. Part I, Section 11. Ordinary Moment Frames (OMF) including Commentary Section C11.**

**6.7. Part I, Section 12. Special Truss Moment Frames (STMF) including Commentary Section C12.**

**7.8. Part I, Section 15.4b. Add the following to the end of the paragraph:**

**15.4b.** Where reinforcement at the beam-to-column connection at the Link end precludes yielding of the beam over the reinforced length, the Link is permitted to be the beam segment from the end of the reinforcement to the brace connection. Where such Links are used and the Link length does not exceed  $1.6 M_p/V_p$ , cyclic testing of the reinforced connection is not required if the design strength of the reinforced section and the connection equals or exceeds the required strength calculated based upon the strain-hardened Link as described in Section 15.6a. Full depth stiffeners as required in Section 15.3a. shall be placed at the Link-to-reinforcement interface. *Cyclic testing of the Link connection to the weak axis of a wide flange column is required for any length link.*

**8. Part I, Section S2. Add the following:**

**S2. SYMBOLS**

**T** Peak deformation (interstory drift angle) in radians ~~used to control loading of the test specimen.~~

**9. Part I, Section S3. Revise to read as follows:**

**S3. DEFINITION**

*Inelastic Rotation.* The permanent or plastic portion of the rotation angle between a beam and the column or between a Link and the column of the Test Specimen, measured in radians. The Inelastic Rotation shall be computed based upon an analysis of Test Specimen deformations. Sources of Inelastic Rotation include yielding of members and connectors, yielding of connection elements, and slip between members and connection elements. For beam-to-column moment connections in Moment Frames, inelastic rotation shall be computed based upon the assumption that

inelastic action is concentrated at a single point located at the intersection of the centerline of the beam with the centerline of the column. The rotation is represented by the plastic chord rotation angle calculated as the plastic deflection of the beam or girder, at the center of its span divided by the distance between the center of the beam span and the centerline of the panel zone of the beam column connection. For link-to-column connections in Eccentrically Braced Frames, inelastic rotation shall be computed based upon the assumption that inelastic action is concentrated at a single point located at the intersection of the centerline of the link with the face of the column.

**10. Part I, Section S5.2. Revise to read as follows:**

**S5.2. Size of Members**

1. The size of the beam or Link used in the Test Specimen shall be within the following limits:

a. *At least one of the test beams or Links shall be 100% of the depth of the prototype beam or Link. For the remaining specimens, the depth of the test beam or Link shall be no less than 90 percent of the depth of the Prototype beam or Link.*

b. *At least one of the test beams or Links shall be 100% of the weight per foot of the prototype beam or Link. For the remaining specimens, the weight per foot of the test beam or Link shall be no less than 75 percent of the weight per foot of the Prototype beam or Link.*

**11. Part I, Section ~~S6.3~~ S6.2 Revise to Add the following:**

**S6.3 ~~S6.2~~ Loading Sequence**

Loads shall be applied to the Test Specimen, up to the completion of the test, to produce the following deformations:

1. ~~6 cycles of loading at  $\Delta = 0.00375$~~
2. ~~6 cycles of loading at  $\Delta = 0.005$~~
3. ~~6 cycles of loading at  $\Delta = 0.0075$~~
4. ~~4 cycles of loading at  $\Delta = 0.01$~~
5. ~~2 cycles of loading at  $\Delta = 0.015$~~
6. ~~2 cycles of loading at  $\Delta = 0.02$~~
7. ~~2 cycles of loading at  $\Delta = 0.03$~~
8. *After completion of loading cycles at 0.03, testing shall be continued to applying cyclic loads to produce  $\Delta$  equal to 0.04, 0.05, etc., with two complete loading cycles at each increment.*

Continue loading at increments of  $\Delta = 0.01$  rad., with two



cycles of loading at each step.

Or alternatively, the loading sequence may be the following:

1. 3 cycles of loading at  $0.25\delta_y < \delta \leq 0.5\delta_y$
2. 3 cycles of loading at  $0.6\delta_y < \delta \leq 0.8\delta_y$
3. 3 cycles of loading at  $\delta = \delta_y$
4. 3 cycles of loading at  $\delta = 2\delta_y$
5. 3 cycles of loading at  $\delta = 3\delta_y$
6. 2 cycles of loading at  $\delta = 4\delta_y$
7. After completion of the loading cycles at  $4\delta_y$ , testing shall be continued by applying cyclic loads to produce  $\delta$  equal to  $5\delta_y$ ,  $6\delta_y$ ,  $7\delta_y$ , etc. Two cycles of loading shall be applied at each incremental value of deformation.

Other loading sequences are permitted to be used to qualify the Test Specimen when they are demonstrated to be of equivalent severity.

## 12. Part I - Section S10. Revise as follows:

### S10. ACCEPTANCE CRITERIA

For each connection used in the actual frame, at least three cyclic tests are required for each condition in which the Essential Variables, as listed in Section S5, remain within the required limits. All tests shall satisfy the criteria stipulated in Sections 9.2, or 15.4, as applicable. In order to satisfy interstory drift angle and Inelastic Rotation requirements, each Test Specimen shall sustain the required interstory drift angle and inelastic rotation for at least two complete loading cycles without exhibiting rapid strength deterioration.

#### ITEM 4-15 – Committee Recommendations

A	AA	D	FS

\* \* \*  
(END OF ITEM)

#### SUB-ITEM 4-16

Section 2213A.7.6 - Amend Section 2213A.7.6 as follows:

**2213A.7.6 Trusses in SMRF.** Not adopted by DSA  
Trusses may be used as horizontal members in SMRF if the sum of the truss seismic force flexural strength exceeds the sum of the column seismic force flexural strength immediately above and below the truss by a factor of at least 1.25. For this determination the strengths of the members shall be reduced by the

gravity load effects. In buildings of more than one story, the column axial stress shall not exceed  $0.4F_y$  and the ratio of the unbraced column height to the least radius of gyration shall not exceed 60. Columns shall have allowable stresses reduced 25 percent when one end frames into a truss, and 50 percent when both ends frame into trusses. The connection of the truss chords to the column shall develop the lesser of the following:

1. The strength of the truss chord.
2. The chord force necessary to develop 125 percent of the flexural strength of the column

#### ITEM 4-16 – Committee Recommendations

A	AA	D	FS

\* \* \*  
(END OF ITEM)

#### SUB-ITEM 4-17

**Chapter 16B, Division IV** - Repeal DSA-SS adoption of chapter 16B, Division IV.

#### Earthquake Regulations for Seismic-Isolated Structures ~~[For DSA-SS]~~

Authority: Education Code Sections 17310 and 81142.  
Reference: Education Code Sections 17280 - 17317, 81130 - 81149.

#### ITEM 4-17 – Committee Recommendations

A	AA	D	FS

\* \* \*  
(END OF ITEM)

## INITIAL STATEMENT OF REASONS

### STATEMENT OF SPECIFIC PURPOSE AND RATIONALE

#### Purpose:

Sections 1627A, 1629A, 1630A and 1631A, Tables 16A-L and 16A-M

The proposed changes to Sections 1627A, 1629A, 1630A and 1631A update the requirements used to select analysis procedures for seismic design of irregular structures. The current code language has remained essentially unchanged since the 1989 California Building Code (CBC). It no longer represents the state of the art and can result in an overly conservative design. In addition, with the addition of near-source effects in the 1997 Uniform Building Code (UBC) model code, the design procedures can produce extremely conservative results.

Under the current provisions, any structure classified as irregular must use the dynamic lateral force procedure. This triggers additional analysis, ground motion, and force scaling requirements. In general, irregular buildings must be designed for 25 to 50 percent higher loads than buildings deemed to be regular. These increases are in addition to those triggered by soil conditions and near source effects.

The most current seismic design guidelines have modified the procedures for irregular structures, in light of experience gained in the 1989 Loma Prieta, 1994 Northridge, and 1995 Kobe earthquakes. Rather than treating all irregular structures the same, current guidelines now consider the effects of irregularities individually. Certain highly irregular structural configurations are no longer permitted for essential buildings in areas of high seismic risk.

The proposed changes to Sections 1627A, 1629A, 1630A and 1631A will improve seismic safety and expected performance by restricting the use of highly irregular structural systems, and reduce the cost of construction by updating the design requirements of structures containing common and less severe irregular features.

### **Sections 1632A and 1633A**

The proposed changes to Sections 1632A and 1633A are editorial, clarifying detailed structural requirements for piping systems, shear wall boundary elements shared by more than one wall, and elevators.

### **Sections 2210A, 2211A, 2213A**

The proposed changes to Sections 2210A, 2211A, and 2213A adopt the latest edition of the American Institute for Steel Construction's latest recommendations for seismic design of steel structures. These recommendations reflect the current state of the art for design of steel structures.

### **Chapter 16B Division IV**

DSA proposes to repeal the adoption of Chapter 16B, Division IV (*Earthquake Regulations for Seismic-Isolated Structures*), which is contained within Volume 2B of the California Building Code, 1998 edition. These provisions were developed for use in conjunction with the 1994

edition model code, while DSA has continued the adoption of 1997 edition model code. The current applicable standard for base-isolation design is contained in the 1998 California Building Code, Appendix Chapter 16, Division IV.

### **Rationale:**

#### **Section 1627A.**

A definition for irregular structure is added. The seismic provisions of Title 24 require that buildings be classified as regular or irregular, based on their configuration. While the types of irregular features are clearly defined, it is only implied that a building possessing one or more of these features is classified as irregular. This proposal clearly defines an irregular structure as one having plan or vertical irregularities.

#### **Section 1629A.8**

This proposal modifies the procedures used to select analysis procedures for seismic design. Section 1629A.8.3 is amended to permit the use of the static lateral force procedure for buildings with reentrant corners, but no other irregularities. The effects of the reentrant corners must still be considered in the design, but their presence does not trigger the use of the dynamic lateral force procedures.

Section 1629A.8.4, Item 2 has been amended to further clarify that, except as permitted by Sections 1629A.8.3 and Section 1630A.4.2, all irregular structures must use the dynamic procedures.

#### **Section 1629A.9**

This proposal amends the limitations placed on the use of irregular structural systems. Buildings with discontinuity in capacity (weak story), severe soft story, and severe torsional irregularity will not be permitted. Structures with these attributes have performed poorly in past earthquakes. The most current seismic design guidelines prohibit these types of irregularities in essential structures in areas of high seismic risk.

#### **Section 1630A.2.2**

This proposal modifies the empirical method for computing building period (Method A), to include near source effects and an importance factor. Method A is intended to provide a quick, conservative estimate of the period of a structure. It is an empirical method, developed based on period measurements made in structures over a period of years. The vast majority of these measurements were made in commercial-type structures, designed to earlier versions of the building code. However, the equation presently in the CBC fails to recognize that period is directly proportional to the base shear coefficient (unreduced by the R-factor) that is used for design and that this coefficient is significantly larger for hospital buildings than

for the structures on which the calibration was based. As a result, the Method A period often exceeds the computed Method B period and can result in an unconservative estimate of required strength (if the Method A period is used in lieu of the Method B computation, as permitted by the CBC). This amendment would eliminate this error by making the Method A period proportional to the importance factor and near field factors used in determination of the base shear.

#### **Section 1630A.4**

This proposal amends the simplified, “two-step” approach to the design of structures with vertical combinations of structural systems to permit use of the method for irregular structures. Under current code, the method may only be used when both the rigid base and flexible superstructure are regular. This restriction is not found in the most current seismic design guidelines. The proposed amendments provide the necessary guidance for application of the two-step method to irregular structures.

#### **Section 1630A.7**

This editorial proposal amends the definitions of  $\Delta_{ag}$  and  $\Delta_{max}$  to clarify that interstory drift is checked at each level for application of the amplification factor.

#### **Section 1630A.10**

This editorial proposal clarifies that when exceeding the permissible story drifts, continued operation as well as life safety performance must be considered for essential buildings.

#### **Section 1631A.3**

This proposal amends the Section governing the mathematical model for irregular structures to include the effects of diaphragm stiffness when the building has one or more diaphragm discontinuities. The current CBC does not require explicit inclusion of the effects of these discontinuities, but the entire structure is subject to a minimum increase of 25% to the design lateral load. This amendment would assure that the effects of the diaphragm discontinuities are properly considered in the design.

#### **Section 1631A.5.4**

This proposal amends the Section the scaling of elastic response parameters for design. Under the current CBC, all irregular structures must be designed for a minimum of 125% of the base shear determined using the static analysis procedures. In addition, the design base shear cannot be less than  $V_{sc}$ , a load scaled to the site specific spectrum.

This amendment would restrict the application of the 25% base shear increase to buildings soft stories or mass

irregularities, both very undesirable traits. The proposed exception would eliminate the base shear increase for these structures where it can be shown that the change in inter-story drifts is minimal. With the introduction of the near field factors,  $V_{sc}$ , is no longer needed, since the near source effects are included in the design lateral force. These amendments would bring the CBC into general conformance with other the most current seismic design guidelines.

#### **Section 1632A.6**

This editorial amendment clarifies the section of the CBC that identifies piping that is exempt from seismic bracing requirements. As currently written, the language implies that all medical gas and vacuum piping must be braced, regardless of size. This amendment clarifies that piping under 1 inch diameter need not be braced. The section has also been amended to clarify that when omitting braces from conduit, the effects of impact on adjacent components must be considered.

#### **Section 1633A.1**

The current CBC requires that columns of a structure that form part of two or more intersecting lateral-force-resisting systems trigger consideration of earthquakes acting in a direction other than the principal axes. Shear wall boundary elements are designed to act as columns, resisting axial loads. This editorial proposal clarifies that for the purposes of determining the effects of earthquakes acting in a direction other than the principal axes, a shear wall boundary element is considered equivalent to a column.

#### **Section 1633A.2.13.1**

The California amendments governing the design of elevator components were brought forward from the 1998 CBC to the 2001 CBC. However, at the time, the loads were not modified to reflect that the 1998 CBC was based on allowable stress design, while the basis for the 2001 CBC is strength design. This editorial amendment corrects this oversight by noting that the loads given in this section are at the allowable stress design level.

#### **Table 16A-L**

Table 16A-L has been amended to include the Severe Soft Story irregularity. Structures with this very undesirable feature are not permitted in the most current seismic guidelines for essential buildings in high seismic risk areas. In addition, the description of In-plane discontinuity has been clarified.

#### **Table 16A-M**

Table 16A-M has been amended to include the Severe Torsional irregularity. Structures with this very undesirable feature are not permitted in the most current seismic guidelines for essential buildings in high seismic risk areas.

## **Section 2210A and 2211A**

This amendment updates the seismic design requirements for steel structures to include Supplement 2 of the Seismic Provisions for Structural Steel Buildings, 1997 edition, published by American Institute for Steel Construction (AISC). Supplement 2 represents the latest seismic design criteria for steel structures compatible with the 1997 UBC. The DSA amendments to Supplement 1 of the Seismic Provisions for Structural Steel Buildings, 1997 edition, are brought forward, modified as required to be compatible with the language of Supplement 2. The definition and requirements for inelastic rotation and rapid strength deterioration are retained from Supplement 1.

## **Section 2213A.7.6**

This proposal deletes the provisions for use of trusses in special moment resistant frames. The Seismic Provisions for Structural Steel Buildings published by AISC do not permit this type of construction in special moment resistant frames.

## **Chapter 16B - Division IV**

This proposal repeals DSA-SS adoption of Division IV, Chapter 16B (*Earthquake Regulations for Seismic-Isolated Structures*), which is contained within Volume 2B of the California Building Code, 1998 edition. These provisions were developed for use in conjunction with the 1994 edition model code, while DSA has continued the adoption of 1997 edition model code. The current applicable standard for base-isolation design is contained in the 1998 California Building Code, Appendix Chapter 16, Division IV.

## **TECHNICAL, THEORETICAL, AND EMPIRICAL STUDY, REPORT, OR SIMILAR DOCUMENTS.**

NEHRP Recommended Provisions for Seismic Regulations for New Buildings and Other Structures, 2000 Edition, FEMA 368. March 2001.

Seismic Provisions for Structural Steel Buildings, April 15, 1997 published by the American Institute of Steel Construction, 1 East Wacker Drive, Suite 3100, Chicago, IL 60601, including Supplement No. 2 dated November 10, 2000.

## **CONSIDERATION OF REASONABLE ALTERNATIVES.**

The alternative to these proposed regulations would be to leave regulations as they are. The alternative was reject, since it would maintain design requirements that are more restrictive than needed to accomplish the performance objectives for hospitals in California.

## **REASONABLE ALTERNATIVES THE AGENCY HAS IDENTIFIED THAT WOULD LESSEN ANY ADVERSE IMPACT ON SMALL BUSINESS.**

No adverse on small business is expected.

## **FACTS, EVIDENCE, DOCUMENTS, TESTIMONY, OR OTHER EVIDENCE OF NO SIGNIFICANT ADVERSE ECONOMIC IMPACT ON BUSINESS.**

The regulations proposed will have no significant adverse impact on business, since they are less restrictive than current regulations.

## **DUPLICATION OR CONFLICTS WITH FEDERAL REGULATIONS.**

The regulations do not duplicate or conflict with federal regulations.

## **ESTIMATE OF COST OR SAVINGS**

- ◆ Cost or Savings to any state agency: **NO**
- ◆ Cost to any local agency required to be reimbursed under Part 7 (commencing with Section 17500) of Division 4: **NO**
- ◆ Cost to any school district required to be reimbursed under Part 7 (commencing with Section 17500) of Division 4: **NO**
- ◆ Other nondiscretionary cost or savings imposed on local agencies: **NO**
- ◆ Cost or savings in federal funding to the state: **NO**

## **INITIAL DETERMINATION OF NO SIGNIFICANT STATEWIDE ADVERSE ECONOMIC IMPACT ON BUSINESSES**

The Division of the State Architect has made an initial determination that the amendment of these regulations will not have a significant statewide adverse economic impact on businesses, including the ability of California businesses to compete with business in other states.

## **DECLARATION OF EVIDENCE**

No facts, evidence, documents, testimony or other evidence has been relied upon to support the initial determination of no effect.

## **FINDING OF NECESSITY FOR THE PUBLIC'S HEALTH, SAFETY, OR WELFARE**

The proposed action does not require a report by any business or agency, so the Division of the State Architect has not made a finding of necessity for public's health, safety or welfare.

## **COST IMPACT ON REPRESENTATIVE PRIVATE PERSON OR BUSINESS**

The Division of the State Architect is not aware of any cost impacts that a representative private person or business would necessarily incur in reasonable compliance with the proposed action.

## **ASSESSMENT OF EFFECT OF REGULATIONS UPON JOBS**

#### **AND BUSINESS EXPANSION, ELIMINATION OR CREATION**

The Division of the State Architect has assessed whether or not and to what extent this proposal will affect the following:

- ◆ The creation or elimination of jobs within the State of California.  
The Division of the State Architect has determined that the proposed action has no effect.
- ◆ The creation of new businesses or the elimination of existing businesses within the State of California.  
The Division of the State Architect has determined that this proposal has no effect.
- ◆ The expansion of businesses currently doing business with the State of California.  
The Division of the State Architect has determined that the proposed action has no effect.

#### **INITIAL DETERMINATION OF SIGNIFICANT EFFECT ON HOUSING COSTS**

The Division of the State Architect has made an initial determination that this proposal WOULD NOT have a significant effect on housing costs. The CBSC contact designated below will make the Division of the State Architect's evaluation of the effect of the proposed regulatory action on housing costs available upon request.

#### **STAFF FINDINGS**

None

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EXPRESS TERMS

SUB-ITEM 5-1

Section 1627A - Amend Section 1627A as follows:

SECTION 1627A - DEFINITIONS

For the purposes of this division, certain terms are defined as follows:

....

**INCIDENTAL STRUCTURAL ALTERATIONS OR ADDITIONS** are alterations or additions, which would not reduce the story lateral shear force-resisting capacity by more than 5 percent or increase the story shear by more than 5 percent in any existing story.

**IRREGULAR STRUCTURE** is a structure designated as having one or more plan or vertical irregularities.

**LATERAL-FORCE-RESISTING SYSTEM** is that part of the structural system designed to resist the Design Seismic Forces.

....

ITEM 5-1 – Committee Recommendations

A	AA	D	FS

\* \* \*  
(END OF ITEM)

SUB-ITEM 5-2

Section 1629A.8 - Amend Section 1629A.8 as follows:

1629A.8 Selection of Lateral-force Procedure.

**1629A.8.1 General.** Any structure may be, and certain structures defined below shall be, designed using the dynamic lateral- force procedures of Section 1631A.

**1629A.8.2 Simplified static.** *Not adopted by the State of California OSHPD.*

**1629A.8.3 Static.** The static lateral force procedure of

Section 1630A may be used for the following structures:

1. *Not adopted by the State of California OSHPD.*  
2. Regular structures under 240 feet (73 152 mm) in height with lateral force resistance provided by systems listed in Table 16A-N, except where Section 1629A.8.4, Item 4, applies.

3. Irregular structures with flexible diaphragms not more than three stories or 30 feet (9144 mm) in height.

4. Structures having a flexible upper portion supported on a rigid lower portion where both portions of the structure considered separately can be classified as being regular, the average story stiffness of the lower portion is at least 10 times the average story stiffness of the upper portion and the period of the entire structure is not greater than 1.1 times the period of the upper portion considered as a separate structure fixed at the base.

5. Wood-frame structures having wood shear walls and wood diaphragms.

6. Irregular structures with reentrant corners, plan irregularity Type 2, Table 16A-M, which are otherwise eligible for static analysis.

**1629A.8.4 Dynamic.** The dynamic lateral-force procedure of Section 1631A shall be used for all other structures, including the following:

1. Structures 240 feet (73 152 mm) or more in height.  
2. Structures having a stiffness, weight or geometric plan or vertical irregularity of Type 1, 2 or 3, as defined in Table 16A-L or 16A-M, or structures having irregular features not described in Table 16A-L or 16A-M, except as permitted by Section 1629A.8.3 and Section 1630A.4.2.

3. Structures over five stories or 65 feet (19 812 mm) in height in Seismic Zones 3 and 4 not having the same structural system throughout their height except as permitted by Section 1630A.4.2.

4. Structures, regular or irregular, except those defined in Section 1629A.8.3, Items 3 and 5, located on Soil Profile Type  $S_F$ , that have a period greater than 0.5 second as calculated in accordance with Method B in Section 1630A.2.2. The analysis shall include the effects of the soils at the site and shall conform to Section 1631A.2, Item 4.

....

ITEM 5-2 – Committee Recommendations

A	AA	D	FS

\* \* \*

(END OF ITEM)

#### SUB-ITEM 5-3

**Section 1629A.9** - Amend Section 1629A.9 as follows:

##### 1629A.9 System Limitations.

**1629A.9.1 Discontinuity.** Structures with a discontinuity in capacity, vertical irregularity Type 5 as defined in Table 16A-L, are not permitted, shall not be over two stories or 30 feet (9144 mm) in height where the weak story has a calculated strength of less than 65 percent of the story above.

**EXCEPTION:** Where the weak story is capable of resisting a total lateral seismic force of  $S_e$  times the design force prescribed in Section 1630A.

##### 1629A.9.2 Undefined structural systems....

##### 1629A.9.3 Irregular features....

**1629A.9.4 Severe Soft Story.** Structures with a severe soft story vertical irregularity Type 1b, as defined in Table 16A-L, are not permitted.

**1629A.9.5 Severe torsional irregularity.** Structures with a severe torsional irregularity, plan irregularity Type 1b, as defined in Table 16A-M are not permitted.

....

#### ITEM 5-3 – Committee Recommendations

A	AA	D	FS

\* \* \*

(END OF ITEM)

#### SUB-ITEM 5-4

#### Section 1630A.2.2

Amend Section 1630A.2.2 as follows:

**1630A.2.2 Structure Period.** The value of  $T$  shall be determined from one of the following methods:

1. Method A: For all buildings, the value of  $T$  may be approximated from the following formula:

$$T_A = C_t (h_n)^{3/4} \quad T_A = \frac{C_t (h_n)^{3/4}}{IN_v}$$

(30A-8)

WHERE:

....

#### ITEM 5-4 – Committee Recommendations

A	AA	D	FS

\* \* \*

(END OF ITEM)

#### SUB-ITEM 5-5

**Section 1630A.4** - Amend Section 1630A.4 as follows:

##### 1630A.4 Combinations of Structural Systems.

**1630A.4.1 General.** Where combinations of structural systems are incorporated into the same structure, the requirements of this section shall be satisfied.

**1630A.4.2 Vertical combinations.** The value of  $R$  used in the design of any story shall be less than or equal to the value of  $R$  used in the given direction for the story above.

**EXCEPTION:** This requirement need not be applied to a story where the dead weight above that story is less than 10 percent of the total dead weight of the structure.

Structures may be designed using the procedures of this section under the following conditions:

1. The entire structure is designed using the lowest  $R$  of the lateral-force-resisting systems used, or

2. ~~The following two~~ Two-stage static analysis procedures may be used ~~for structures conforming to Section 1629A.8.3, Item 4, providing the structure complies with the following:~~



2.1 The flexible upper portion shall be designed as a separate structure, supported laterally by the rigid lower portion, using the appropriate values of *R* and *D*.

2.2 The rigid lower portion shall be designed as a separate structure using the appropriate values of *R* and *D*. The reactions from the upper portion shall be those determined from the analysis of the upper portion amplified by the ratio of the (*R*/ $\Delta$ ) of the upper portion over (*R*/ $\Delta$ ) of the lower portion. This ratio shall not be less than one.

2.3 Where design of elements of the upper portion are governed by special seismic loads, the special loads shall be considered in the design of the lower portion.

2.4 The lower portion shall have a stiffness at least 10 times the upper portion.

2.5 The period of the entire structure shall not be greater than 1.1 times the period of the upper portion considered as a separate structure fixed at the base.

2.6 The detailing requirements required by the lateral system of the upper portion shall be used for structural components common to the structural system of lower portion.

2.7 If separate models are used to design the upper and lower portions, the model boundary conditions of the upper portion shall be compatible with actual strength and stiffness of the supporting elements of the lower portion.

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**ITEM 5-5 – Committee Recommendations**

A	AA	D	FS

\* \* \*  
(END OF ITEM)

**SUB-ITEM 5-6**

**Section 1630A.7** - Amend Section 1630A.7 as follows:

**1630A.7 Horizontal Torsional Moments.** Provisions shall be made for the increased shears resulting from horizontal torsion where diaphragms are not flexible. The most severe load combination for each element

shall be considered for design.

....

Where torsional irregularity exists, as defined in Table 16A-M, the effects shall be accounted for by increasing the accidental torsion at each level by an amplification factor, *A<sub>x</sub>*, determined from the following formula:

$$A_x = \left[ \frac{\Delta_{max}}{1.2\Delta_{avg}} \right]^2$$

(30A-16)

WHERE:

$\Delta_{avg}$  = the average of the interstory drift at the extreme points of the structure at Level *x*.  
 $\Delta_{max}$  = the maximum interstory drift at Level *x*.

....

**ITEM 5-6 – Committee Recommendations**

A	AA	D	FS

\* \* \*  
(END OF ITEM)

**SUB-ITEM 5-7**

**Section 1630A.10**

Amend Section 1630A.10 as follows:

**1630A.10 Story Drift Limitation**

**1630A.10.1 General...**

**1630A.10.2 Calculated.** Calculated story drift using  $\Delta_M$  shall not exceed 0.025 times the story height for structures having a fundamental period of less than 0.7 second. For structures having a fundamental period of 0.7 second or greater, the calculated story drift shall not exceed 0.020 times the story height.

**EXCEPTIONS:** 1. These drift limits may be exceeded when it is demonstrated that greater drift can be tolerated by both structural elements and nonstructural

2. There shall be no drift limit in single-story steel-framed structures classified as Groups B, F and S Occupancies or Group H, Division 4 or 5 Occupancies. In Groups B, F and S Occupancies, the primary use

**A      AA      D      FS**

**SUB-ITEM 5-8**

**1631A.3 Mathematical Model.** A mathematical model of the physical structure shall represent the spatial distribution of the mass and stiffness of the structure to an extent that is adequate for the calculation of the significant features of its dynamic response. A three-dimensional model shall be used for the dynamic analysis of structures with highly irregular plan configurations such as those having a plan irregularity defined in Table 16A-M and having a rigid or semi rigid diaphragm. The stiffness properties used in the analysis and general mathematical modeling shall be in accordance with Section 1630A.1.2. *The mathematical model of buildings with diaphragm discontinuities, as defined in Table 16-M, shall explicitly include the effect of diaphragm stiffness.*

**A      AA      D      FS**

**SUB-ITEM 5-9**

$$SR = \frac{\sum_{m=1}^n (MPE_m PM_m)}{\sum_{m=1}^n (CBC_m PM_m)} \quad (31A-2)$$

~~V = the total design base shear calculated in accordance with Formula (30A-4).~~

~~WHERE:~~

~~CBC<sub>m</sub> = spectral acceleration determined from the design response spectrum given in Figure 16A-3 for the appropriate soil type at the period of the mth mode.~~

~~MPE<sub>m</sub> = spectral acceleration of the site-specific maximum probable earthquake spectrum (5 percent damping) at the period of the mth mode. The value of MPE<sub>m</sub> need not exceed 1.5.~~

~~n = number of significant modes required for at least 90 percent of the total building mass to participate in the direction of interest.~~

~~PM<sub>m</sub> = fraction of total building mass participating in the mth mode in the direction of interest.~~

~~The design base shear shall not be taken as less than V<sub>scf</sub> unless justification is provided to substantiate a level of safety equivalent to structural designs at other sites and meeting the requirements of Section 1631A.2, Item 6.~~

~~The corresponding reduced design seismic forces shall be used for design in accordance with Section 1612A.~~

Section 1632A.6 - Amend Section 1632A.2.6 as follows:

#### ITEM 5-9 – Committee Recommendations

A      AA      D      FS

\*   \*   \*  
(END OF ITEM)

#### SUB-ITEM 5-10

**1632A.6 HVAC Ductwork, Plumbing/Piping and Conduit Systems.** All pipes, ducts and conduit shall be braced to resist the forces prescribed in Section

~~1630A.2. 1632A.~~ Ductwork shall be constructed in accordance with provisions contained in Part 4, Title 24, California Mechanical Code. Pipes and their connections constructed of ductile materials (copper, ductile iron, steel or aluminum) with brazed or welded connections shall have brace spacing not exceeding that specified in Section ~~1630A.5~~ **1632A.5** or other standards approved by the enforcement agency. Pipes and their connections, constructed of nonductile materials (e.g., cast iron, no-hub pipe and plastic) or with screwed connections, shall have the brace spacing reduced to one-half of the spacing allowed for ductile material in accordance with Section ~~1630A.5~~ **1632A.5** or other standards approved by the enforcement agency.

Seismic restraints may be omitted for the following conditions, where flexible connections are provided between components and the associated ductwork, piping, and conduit:

1. ~~Fuel, medical gas, and vacuum~~ piping less than 1 inch (25 mm) inside diameter.

2. All other piping less than 2.5 inches (64 mm) diameter, ~~except medical gas including vacuum piping,~~ or

All piping suspended by individual hangers 12 inches (305 mm) or less in length from the top of the pipe to the bottom of the structural support for the hanger. Rod hangers shall not be constructed in a manner that would subject the rod to bending moments. or

All electrical conduit less than 2.5 inches (64 mm) trade size.

3. All rectangular air-handling ducts less than 6 square feet (0.56 m<sup>2</sup>) in cross-sectional area, or

All round air-handling ducts less than 28 inches (711 mm) in diameter, or

All ducts suspended by hangers 12 inches (305 mm) or less in length from the top of the duct to the bottom of the structural support for the hanger, where the hangers are detailed to avoid bending of the hangers and their connections.

Where lateral restraints are omitted, the piping, ducts, or conduit shall be installed such that lateral motion of the piping, ~~or duct, or conduit~~ will not cause damaging impact with other systems or structural members, or loss of vertical support.

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#### ITEM 5-10 – Committee Recommendations

A      AA      D      FS

\* \* \*

(END OF ITEM)

#### SUB-ITEM 5-11

**Section 1633A.1** - Amend Section 1633A.1 as follows:

**1633A.1 General.** All structural framing systems shall comply with the requirements of Section 1629A. Only the elements of the designated seismic-force-resisting system shall be used to resist design forces. The individual components shall be designed to resist the prescribed design seismic forces acting on them. The components shall also comply with the specific requirements for the material contained in Chapters 19A through 23A. In addition, such framing systems and components shall comply with the detailed system design requirements contained in Section 1633A.

All building components in Seismic Zones 3 and 4 shall be designed to resist the effects of the seismic forces prescribed herein and the effects of gravity loadings from dead, floor live and snow loads.

Consideration shall be given to design for uplift effects caused by seismic loads.

In Seismic Zones 3 and 4, provision shall be made for the effects of earthquake forces acting in a direction other than the principal axes in each of the following circumstances:

The structure has plan irregularity Type 5 as given in Table 16A-M.

The structure has plan irregularity Type 1<sub>a</sub> as given in Table 16A-M for both major axes.

A column of a structure forms part of two or more intersecting lateral-force-resisting systems. For the purposes of this Section, a shear wall boundary element is considered to be equivalent to a column.

**EXCEPTION:** If the axial load in the column due to seismic forces acting in either direction is less than 20 percent of the column axial load capacity.

The requirement that orthogonal effects be considered may be satisfied by designing such elements for 100 percent of the prescribed design seismic forces in one direction plus 30 percent of the prescribed design seismic forces in the perpendicular direction. The combination requiring the greater component strength shall be used for design. Alternatively, the effects of the

two orthogonal directions may be combined on a square root of the sum of the squares (SRSS) basis. When the SRSS method of combining directional effects is used, each term computed shall be assigned the sign that will result in the most conservative result.

#### ITEM 5-11 – Committee Recommendations

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(END OF ITEM)

#### SUB-ITEM 5-12

**Section 1633A.2.13.1** - Amend Section 1633A.2.13.1 as follows:

**1633A.2.13.1** *The design of guide rail support-bracket fastenings and the supporting structural framing shall be in accordance with Section 3030 (k), Part 7, Title 24, using the weight of the counterweight or maximum weight of the car plus not more than 40 percent of its rated load. The seismic forces shall be assumed to be distributed one third to the top guiding members and two thirds to the bottom guiding members of cars and counterweights, unless other substantiating data are provided. Minimum seismic forces shall be 0.5g acting in any horizontal direction, using allowable stress design.*

*Retainer plates are required for both car and counterweight, designed in accordance with Section 3032 (c), Part 7, Title 24, California Code of Regulations. Retainer plates are required at the top and bottom of the car and counterweight, except where safety devices acceptable to the enforcement agency are provided which meet all requirements of the retainer plates, including full engagement of the machined portion of the rail. The design of the car and counterweight guide rails for seismic forces shall be based on the following requirements:*

*1. The lateral forces using allowable stress design shall be based on horizontal acceleration of 0.5g for all buildings.*

*....*

*6. Cab stabilizers and counterweight frames shall be designed to withstand a lateral load equal to 0.5g using allowable stress design*

#### ITEM 5-12 – Committee Recommendations

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(END OF ITEM)

#### SUB-ITEM 5-13

Table 16A-L - Amend Table 16A-L as follows:

**TABLE 16A-L—VERTICAL STRUCTURAL IRREGULARITIES**

IRREGULARITY TYPE AND DEFINITION	REFERENCE SECTION
<b>1a. Stiffness irregularity-soft story</b> A soft story is one in which the lateral stiffness is less than 70 percent of that in the story above or less than 80 percent of the average stiffness of the three stories above.	1629A.8.4, Item 2
<b>1b. Severe Soft Story</b> <i>A severe soft story is one in which the lateral stiffness is less than 60 percent of that in the story above or less than 70 percent of the average stiffness of three stories above.</i>	<u>1629A.8.4, Item 2</u> <u>1629A.9.4</u>
<b>2. Weight (mass) irregularity</b> Mass irregularity shall be considered to exist where the effective mass of any story is more than 150 percent of the effective mass of an adjacent story. A roof that is lighter than the floor below need not be considered.	1629A.8.4, Item 2
<b>3. Vertical geometric irregularity</b> Vertical geometric irregularity shall be considered to exist where the horizontal dimension of the lateral-force-resisting system in any story is more than 130 percent of that in an adjacent story. One-story penthouses need not be considered.	1629A.8.4, Item 2
<b>4. In-plane discontinuity in vertical lateral-force-resisting element</b> An in-plane offset of the lateral-load-resisting elements <del>greater than</del> <u>not within</u> the length of <del>these</del> <u>the</u> elements <u>below</u> .	1630A.8.2
<b>5. Discontinuity in capacity-weak story</b>	1629A.9.1

A weak story is one in which the ratio of the story strength to the story shear is less than 80 percent of that in the story above. The story strength is the strength of all seismic-resisting elements sharing the story shear for the direction under consideration. The load deformation characteristics of the elements shall be considered so that the strength is determined for compatible deformations.

#### ITEM 5-13 – Committee Recommendations

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(END OF ITEM)

#### SUB-ITEM 5-14

Table 16A-M - Amend Table 16A-M as follows:

**TABLE 16A-M—PLAN STRUCTURAL IRREGULARITIES**

IRREGULARITY TYPE AND DEFINITION	REFERENCE SECTION
<b>a. Torsional irregularity-to be considered when diaphragms are not flexible</b> Torsional irregularity shall be considered to exist when the maximum story drift, computed including accidental torsion, at one end of the structure transverse to an axis is more than 1.2 times the average of the story drifts of the two ends of the structure.	1633A.1 1633A.2.9, Item 6
<b>1b. Severe Torsional irregularity-to be considered when diaphragms are not flexible</b> <i>Torsional irregularity shall be considered to exist when the maximum story drift, computed including accidental torsion, at one end of the structure transverse to an axis is more than 1.4 times the average of the story drifts of the two ends of the structure.</i>	<u>1629A.9.5</u> <u>1631B.2.9,</u> <u>Item 6</u>
<b>2. Reentrant corners</b> Plan configurations of a structure	1633A.2.9, Items 6 and 7



## 9.2. Beam-to-Column Joints and Connections

9.2a. The design of all beam-to-column joints and connections used in the Seismic Force Resisting System shall be based upon qualifying cyclic test results in accordance with Appendix S that demonstrate an interstory drift angle of at least 0.04 radians and an inelastic rotation of at least 0.03 radians.

....

4.5. Part I, Section 10. Intermediate Moment Frames (IMF) including Commentary Section C10. Delete.

5.6. Part I, Section 11. Ordinary Moment Frames (OMF) including Commentary Section C11. Not adopted by OSHPD.

6.7. Part I, Section 12. Special Truss Moment Frames (STMF) including Commentary Section C12. Not adopted by OSHPD.

6.8. Part I, Section 15.4b. Add the following to the end of the paragraph:

15.4b. Where reinforcement at the beam-to-column connection at the Link end precludes yielding of the beam over the reinforced length, the Link is permitted to be the beam segment from the end of the reinforcement to the brace connection. Where such Links are used and the Link length does not exceed  $1.6 M_p/V_p$ , cyclic testing of the reinforced connection is not required if the design strength of the reinforced section and the connection equals or exceeds the required strength calculated based upon the strain-hardened Link as described in Section 15.6a. Full depth stiffeners as required in Section 15.3a. shall be placed at the Link-to-reinforcement interface. *Cyclic testing of the Link connection to the weak axis of a wide flange column is required for any length link.*

8. Part I, Section S2. Add the following:  
S2. SYMBOLS

*T* Peak deformation (interstory drift angle) in radians used to control loading of the test specimen.

9. Part I, Section S3. Revise to read as follows:  
S3. DEFINITIONS

*Inelastic Rotation.* The permanent or plastic portion of the rotation angle between a beam and the column or between a Link and the column of the Test Specimen, measured in radians. The Inelastic Rotation shall be computed based upon an analysis of Test Specimen deformations. Sources of Inelastic Rotation include yielding of members and connectors, yielding of connection elements, and slip between members and connection elements. For beam-to-column moment connections in Moment Frames, inelastic rotation shall be computed based upon the assumption that inelastic action is concentrated at a single point located at the intersection of the centerline of the beam with the centerline of the column. The rotation is represented by the plastic chord rotation angle calculated as the plastic deflection of the beam or girder, at the center of

its span divided by the distance between the center of the beam span and the centerline of the panel zone of the beam column connection. For link-to-column connections in Eccentrically Braced Frames, inelastic rotation shall be computed based upon the assumption that inelastic action is concentrated at a single point located at the intersection of the centerline of the link with the face of the column.

10. Part I, Section S5.2. Revise to read as follows:  
S5.2. Size of Members

1. The size of the beam or Link used in the Test Specimen shall be within the following limits:

a. At least one of the test beams or Links shall be 100% of the depth of the prototype beam or Link. For the remaining specimens, the depth of the test beam or Link shall be no less than 90 percent of the depth of the Prototype beam or Link.

b. At least one of the test beams or Links shall be 100% of the weight per foot of the prototype beam or Link. For the remaining specimens, the weight per foot of the test beam or Link shall be no less than 75 percent of the weight per foot of the Prototype beam or Link.

11. Part I, Section ~~S6.3~~ S6.2 ~~Revise to~~ Add the following:

S6.3 S6.2 Loading Sequence

Loads shall be applied to the Test Specimen, up to the completion of the test, to produce the following deformations:

~~1. 6 cycles of loading at  $\Delta = 0.00375$~~

~~2. 6 cycles of loading at  $\Delta = 0.005$~~

~~3. 6 cycles of loading at  $\Delta = 0.0075$~~

~~4. 4 cycles of loading at  $\Delta = 0.01$~~

~~5. 2 cycles of loading at  $\Delta = 0.015$~~

~~6. 2 cycles of loading at  $\Delta = 0.02$~~

~~7. 2 cycles of loading at  $\Delta = 0.03$~~

~~8. After completion of loading cycles at 0.03, testing shall be continued to applying cyclic loads to produce  $\Delta$  equal to 0.04, 0.05, etc., with two complete loading cycles at each increment.~~

Continue loading at increments of  $\Delta = 0.01$  rad., with two cycles of loading at each step.

*Or alternatively, the loading sequence may be the following:*

1. 3 cycles of loading at  $0.25d_y < d \leq 0.5d_y$ ,

2. 3 cycles of loading at  $0.6d_y < d \leq 0.8d_y$ ,

3. 3 cycles of loading at  $d = d_y$ ,

4. 3 cycles of loading at  $d = 2d_y$ ,

5. 3 cycles of loading at  $d = 3d_y$ ,

6. 2 cycles of loading at  $d = 4d_y$ ,

7. After completion of the loading cycles at  $4d_y$ , testing shall be continued by applying cyclic loads to produce  $d$  equal to  $5d_y$ ,  $6d_y$ ,  $7d_y$ , etc. Two cycles of loading shall be applied at each incremental value of deformation.

Other loading sequences are permitted to be used to qualify the Test Specimen when they are demonstrated to be of equivalent severity.

## 12. Part I - Section S10. Revise as follows:

### S10. ACCEPTANCE CRITERIA

For each connection used in the actual frame, at least *three* cyclic tests are required for each condition in which the Essential Variables, as listed in Section S5, remain within the required limits. All tests shall satisfy the criteria stipulated in Sections 9.2, or 15.4, as applicable. In order to satisfy *interstory drift angle and* Inelastic Rotation requirements, each Test Specimen shall sustain the required *interstory drift angle and inelastic* rotation for at least *two complete loading cycles without exhibiting rapid strength deterioration*.

## ITEM 5-16 – Committee Recommendations

A AA D FS

\* \* \*  
(END OF ITEM)

## SUB-ITEM 5-17

Section 2213A.7.6 - Amend Section 2213A.7.6 as follows:

**2213A.7.6 Trusses in SMRF.** ~~Not adopted by OSHPD~~  
Trusses may be used as horizontal members in SMRF if the sum of the truss seismic force flexural strength exceeds the sum of the column seismic force flexural strength immediately above and below the truss by a factor of at least 1.25. For this determination the strengths of the members shall be reduced by the gravity load effects. In buildings of more than one story, the column axial stress shall not exceed 0.4 F<sub>y</sub> and the ratio of the unbraced column height to the least radius of gyration shall not exceed 60. Columns shall have allowable stresses reduced 25 percent when one end frames into a truss, and 50 percent when both ends frame into trusses. The connection of the truss chords to the column shall develop the lesser of the following:

1. The strength of the truss chord.
2. The chord force necessary to develop 125 percent of the flexural strength of the column

Notation

Authority: Health and Safety Code Sections 1275, 129790, and 129850 and Government Code 11152.5.

Reference(s): Health and Safety Code Section 129850.

## ITEM 5-17 – Committee Recommendations

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\* \* \*  
(END OF ITEM)

## INITIAL STATEMENT OF REASONS

### STATEMENT OF SPECIFIC PURPOSE AND RATIONALE:

#### Purpose:

**Title 24, Part 2, Sections 1627A, 1629A, 1630A and 1631A, Tables 16A-L and 16A-M**

The proposed changes to Sections 1627A, 1629A, 1630A and 1631A update the requirements used to select analysis procedures for seismic design of irregular structures. The current code language has remained essentially unchanged since the 1989 California Building Code (CBC). It no longer represents the state of the art and results in overly conservative designs in some cases. Additionally, with the addition of near-source effects in the 1997 Uniform Building Code (UBC) model code, the design procedures can produce extremely conservative results.

Under the current provisions, any structure classified as irregular must use the dynamic lateral force procedure. This triggers additional analysis, ground motion, and force



scaling requirements. In general, irregular buildings must be designed for 25 to 50 percent higher loads than buildings deemed to be regular. These increases are in addition to those triggered by soil conditions and near source effects.

The most current seismic design guidelines have modified the procedures for irregular structures, in light of experience gained in the 1989 Loma Prieta, 1994 Northridge, and 1995 Kobe earthquakes. Rather than treating all irregular structures the same, current guidelines now consider the effects of irregularities individually. Certain highly irregular structural configurations are no longer permitted for essential buildings in areas of high seismic risk. The proposed changes to Sections 1627A, 1629A, 1630A and 1631A will improve seismic safety and expected performance by restricting the use of highly irregular structural systems, and reduce the cost of construction by updating the design requirements of structures containing common and less severe irregular features.

#### **Title 24, Part 2, Sections 1632A and 1633A**

The proposed changes to Sections 1632A and 1633A are editorial, clarifying detailed structural requirements for piping systems, shear wall boundary elements shared by more than one wall, and elevators.

#### **Title 24, Part 2, Sections 2210A, 2211A, 2213A**

The proposed changes to Sections 2210A, 2211A, and 2213A adopt the latest edition of the American Institute for Steel Construction's (AISC) recommendations for seismic design of steel structures. These recommendations reflect the current state of the art for design of steel structures.

#### **Rationale:**

#### **Section 1627A.**

A definition for "irregular structure" is being added to Section 1627A. The seismic provisions of Title 24 require that buildings be classified as "regular" or "irregular", based on their configuration. While the types of irregular features are clearly defined, it is only implied that a building possessing one or more of these features is classified as irregular. This proposal clearly defines an irregular structure as one having plan or vertical irregularities.

#### **Section 1629A.8**

This proposal modifies the procedures used to select analysis procedures for seismic design. Section 1629A.8.3 is amended to permit the use of the static lateral force procedure for buildings with reentrant corners, but no other irregularities. The effects of the reentrant corners must still be considered in the design, but their presence does not trigger the use of the dynamic lateral

force procedures.

Section 1629A.8.4, Item 2 has been amended to further clarify that, except as permitted by Sections 1629A.8.3 and Section 1630A.4.2, all irregular structures must use the dynamic procedures.

#### **Section 1629A.9**

This proposal amends the limitations placed on the use of irregular structural systems. Buildings with discontinuity in capacity (weak story), severe soft story, and severe torsional irregularity will not be permitted. Structures with these attributes have performed poorly in past earthquakes. The most current seismic design guidelines prohibit these types of irregularities in essential structures in areas of high seismic risk.

#### **Section 1630A.2.2**

This proposal modifies the empirical method for computing building period (Method A), to include near source effects and an importance factor. Method A is intended to provide a quick, conservative estimate of the period of a structure. It is an empirical method, developed based on period measurements made in structures over a period of years. The vast majority of these measurements were made in commercial-type structures, designed to earlier versions of the building code. However, the equation presently in the CBC fails to recognize that period is directly proportional to the base shear coefficient (unreduced by the R-factor) that is used for design and that this coefficient is significantly larger for hospital buildings than for the structures on which the calibration was based. As a result, the Method A period often exceeds the computed Method B period and can result in an unconservative estimate of required strength (if the Method A period is used in lieu of the Method B computation, as permitted by the CBC). This amendment would eliminate this error by making the Method A period proportional to the importance factor and near field factors used in determination of the base shear.

#### **Section 1630A.4**

This proposal amends the simplified, "two-step" approach to the design of structures with vertical combinations of structural systems to permit use of the method for irregular structures. Under current code, the method may only be used when both the rigid base and flexible superstructure are regular. This restriction is not found in the most current seismic design guidelines. The proposed amendments provide the necessary guidance for application of the two-step method to irregular structures.

#### **Section 1630A.7**

This proposal editorially amends the definitions of  $\Delta_{avg}$ .

and  $\Delta_{max}$  to clarify that interstory drift is checked at each level for application of the amplification factor.

#### **Section 1630A.10**

This editorial proposal clarifies that when exceeding the permissible story drifts, continued operation as well as life safety performance must be considered for essential buildings.

#### **Section 1631A.3**

This proposal amends the Section governing the mathematical model for irregular structures to include the effects of diaphragm stiffness when the building has one or more diaphragm discontinuities. The current CBC does not require explicit inclusion of the effects of these discontinuities, but the entire structure is subject to a minimum increase of 25% to the design lateral load. This amendment would assure that the effects of the diaphragm discontinuities are properly considered in the design.

#### **Section 1631A.5.4**

This proposal amends Section 1631A.5.4 regarding the scaling of elastic response parameters for design. Under the current CBC, all irregular structures must be designed for a minimum of 125% of the base shear determined using the static analysis procedures. In addition, the design base shear cannot be less than  $V_{SC}$ , a load scaled to the site specific spectrum.

This amendment would restrict the application of the 25% base shear increase to buildings with soft stories or mass irregularities, both very undesirable traits. The proposed exception would eliminate the base shear increase for these structures where it can be shown that the change in interstory drifts is minimal. With the introduction of the near field factors,  $V_{SC}$  is no longer needed, since the near source effects are included in the design lateral force. These amendments would bring the CBC into general conformance with other current seismic design guidelines.

#### **Section 1632A.6**

This editorial amendment clarifies the section of the CBC that identifies piping that is exempt from seismic bracing requirements. As currently written, the language implies that all medical gas and vacuum piping must be braced, regardless of size. This amendment clarifies that piping under 1 inch diameter need not be braced. The section has also been amended to clarify that when omitting braces from conduit, the effects of impact on adjacent components must be considered.

#### **Section 1633A.1**

Currently, the CBC requires that columns of a structure

that form part of two or more intersecting lateral-force-resisting systems trigger consideration of earthquakes acting in a direction other than the principal axes. Shear wall boundary elements are designed to act as columns, resisting axial loads. This proposal editorially clarifies that for the purposes of determining the effects of earthquakes acting in a direction other than the principal axes, a shear wall boundary element is considered equivalent to a column.

#### **Section 1633A.2.13.1**

The California amendments governing the design of elevator components were brought forward from the 1998 CBC to the 2001 CBC. However, at the time, the loads were not modified to reflect that the 1998 CBC was based on allowable stress design, while the basis for the 2001 CBC is strength design. This editorial amendment corrects this oversight by noting that the loads given in this section are at the allowable stress design level.

#### **Table 16A-L**

Table 16A-L has been amended to include the "severe soft story" irregularity. Structures with this very undesirable feature are not permitted in the most current seismic guidelines for essential buildings in high seismic risk areas. In addition, the description of In-plane discontinuity has been clarified.

#### **Table 16A-M**

Table 16A-M has been amended to include the "severe torsional" irregularity. Structures with this very undesirable feature are not permitted in the most current seismic guidelines for essential buildings in high seismic risk areas.

#### **Section 2210A and 2211A**

This amendment updates the seismic design requirements for steel structures to include Supplement 2 of the Seismic Provisions for Structural Steel Buildings, 1997 edition, published by American Institute for Steel Construction (AISC). Supplement 2 represents the latest seismic design criteria for steel structures compatible with the 1997 UBC. OSHPD amendments to Supplement 1 of the "Seismic Provisions for Structural Steel Buildings", 1997 edition, are brought forward, modified as required to be compatible with the language of Supplement 2. The definition and requirements for inelastic rotation and rapid strength deterioration are retained from Supplement 1.

#### **Section 2213A.7.6**

This proposal deletes the provisions for use of trusses in special-moment-resistant-frames. The "Seismic Provisions for Structural Steel Buildings" published by AISC do not permit this type of construction in special-moment-resistant-frames.

**TECHNICAL, THEORETICAL, AND EMPIRICAL STUDY, REPORT, OR SIMILAR DOCUMENTS:**

"NEHRP Recommended Provisions for Seismic Regulations for New Buildings and Other Structures", 2000 Edition, FEMA 368. March 2001.

"Seismic Provisions for Structural Steel Buildings", April 15, 1997 published by the American Institute of Steel Construction, 1 East Wacker Drive, Suite 3100, Chicago, IL 60601, including Supplement No. 2 dated November 10, 2000

**CONSIDERATION OF REASONABLE ALTERNATIVES**

The alternative to these proposed regulations would be to leave regulations as they are. The alternative was rejected, since it would maintain design requirements that are more restrictive than needed to accomplish the performance objectives for hospitals in California.

**REASONABLE ALTERNATIVES THE AGENCY HAS IDENTIFIED THAT WOULD LESSEN ANY ADVERSE IMPACT ON SMALL BUSINESS.**

There will be no adverse impact on small business.

**FACTS, EVIDENCE, DOCUMENTS, TESTIMONY, OR OTHER EVIDENCE OF NO SIGNIFICANT ADVERSE IMPACT ON BUSINESS.**

The regulations proposed will have no significant adverse impact on business, since they are less restrictive than current regulations.

**DUPLICATION OR CONFLICTS WITH FEDERAL REGULATIONS**

These regulations do not duplicate Federal regulations.

**ESTIMATE OF COST OR SAVINGS**

- ◆ Cost or Savings to any state agency: Possible minor savings for new construction of state hospitals, veteran's hospitals and correctional treatment under the Department of Corrections and the Department of Youth Authority.
- ◆ Cost to any local agency required to be reimbursed under Part 7 (commencing with Section 17500) of Division 4: **NO**
- ◆ Cost to any school district required to be reimbursed under Part 7 (commencing with Section 17500) of Division 4: **NO**

- ◆ Other nondiscretionary cost or savings imposed on local agencies: **NO**
- ◆ Cost or savings in federal funding to the state: **NO**

Estimate: The amount of savings is indeterminable at this time. The savings will depend on the number of new buildings constructed and if they are "irregular" buildings.

**INITIAL DETERMINATION OF NO SIGNIFICANT STATEWIDE ADVERSE ECONOMIC IMPACT ON BUSINESSES**

The OSHPD has made an initial determination that the adoption/amendment/repeal of this regulation will not have a significant adverse economic impact on businesses, including the ability of California businesses to compete in other states.

**FINDING OF NECESSITY FOR THE PUBLIC'S HEALTH, SAFETY, OR WELFARE**

A report applicable to businesses is not required by these regulations.

**COST IMPACT ON REPRESENTATIVE PRIVATE PERSON OR BUSINESS**

The OSHPD is not aware of any cost impacts that a representative private person or business would necessarily incur in reasonable compliance with the proposed action.

**ASSESSMENT OF EFFECT OF REGULATIONS UPON JOBS AND BUSINESS EXPANSION, ELIMINATION OR CREATION**

The OSHPD has assessed whether or not and to what extent this proposal will affect the following:

- ◆ The creation or elimination of jobs within the State of California.

These regulations will have no affect.

- ◆ The creation of new businesses or the elimination of existing businesses within the State of California.

These regulations will have no affect.

- ◆ The expansion of businesses currently doing business with the State of California.

These regulations will have no affect.

**INITIAL DETERMINATION OF SIGNIFICANT**

## **EFFECT ON HOUSING COSTS**

OSHDP has made a determination that this proposal would not have a significant effect on housing costs.

## **STAFF FINDINGS**

◆ **Item 4-15**, CBSC staff has identified inconsistencies between the model code section 2211A, Part I, Section 9.2a shown by OSHDP and the actual model code section.

◆ #5. Part I, Section 10. – OSHDP is showing the heading for this section with addition of the word **Delete** at the end of the heading. CBSC was not sure if the intention of the state agency was to remove the existing language **“Not Adopted by OSHDP”**.

◆ #6. Part I, Section 11. – OSHDP is showing the heading for this section with the addition of the agency acronym. CBSC has identified that the agency acronym seems to already be existing in the 2001 CBC.

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## **Part 3**

### **California Electrical Code**

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**ITEM 6** [PEME]  
**DSA/SS 2/02**  
**Part 3**  
**Articles 89 and 90, Chapter 1 through 9, Various Articles**

## EXPRESS TERMS

### CALIFORNIA ELECTRICAL CODE - ARTICLE 89 Administrative

Continue Article 89 of the 2001 triennial edition of the California Electrical Code for publication in the 2004 triennial edition of the California Electrical Code.

### CALIFORNIA ELECTRICAL CODE - ARTICLE 90 Introduction

Repeal Article 90 of the 1999 edition of the National Electrical Code and adopt Article 90 of the 2002 NEC for publication in the 2004 triennial edition of the California Electrical Code.

### CALIFORNIA ELECTRICAL CODE - CHAPTER 1 General

Amend Chapter 1 of the 2001 triennial edition of the California Electrical Code as follows for publication in the 2004 triennial edition of the California Electrical Code.

Repeal 1999 NEC Article	2002 NEC Article	DSA-SS Adoption	Comments
100	100	X	
110	110	X	

### CALIFORNIA ELECTRICAL CODE - CHAPTER 2 Wiring and Protection

Amend Chapter 2 of the 2001 triennial edition of the California Electrical Code as follows for publication in the 2004 triennial edition of the California Electrical Code.

Repeal 1999 NEC Article	2002 NEC Article	DSA-SS Adoption	Comments
200	200	X	
210	210	X	
215	215	X	
220	220	X	

225	225	X	
230	230	X	
240	240	X	
250	250	X	
280	280	X	
-	285	X	New NEC article - Transient Voltage Surge Suppressors: TVSSs

### CALIFORNIA ELECTRICAL CODE - CHAPTER 3 Wiring Methods and Materials

Amend Chapter 3 of the 2001 triennial edition of the California Electrical Code as follows for publication in the 2004 triennial edition of the California Electrical Code.

Repeal 1999 NEC Article	2002 NEC Article	DSA-SS Adoption	Comments
300	300	X	
305	-		Relocated to Article 527 in 2002 NEC
310	310	X	
373	312	X	
370	314	X	
333	320	X	
363	322	X	
328	324	X	
325	326	X	
326	328	X	
334	330	X	
330	332	X	
336	334	X	
340	336	X	
338	338	X	
339	340	X	
345	342	X	
346	344	X	



350	348	X	
351	350	X	
347	352	X	
343	354	X	
351	356	X	
348	358	X	
349	360	X	
331	362	X	
374	366	X	
364	368	X	
365	370	X	
358	372	X	
356	374	X	
362	376	X	
362	378	X	
353	380	X	
342	382	X	
-	384	X	no correspondi ng article in 1999 NEC
352	386	X	
352	388	X	
354	390	X	
318	392	X	
324	394	X	
321	396	X	
320	398	X	

**CALIFORNIA ELECTRICAL CODE - CHAPTER 4**  
**Equipment for General Use**

Amend Chapter 4 of the 2001 triennial edition of the California Electrical Code as follows  
for publication in the 2004 triennial edition of the California Electrical Code.

Repeal 1999 NEC Article	2002 NEC Article	DSA-SS Adoption	Comments
400	400	X	
402	402	X	

380	404	X	
410	406	X	
384	408	X	
410	410	X	
411	411		
422	422	X	
424	424	X	
426	426	X	
427	427	X	
430	430	X	
440	440	X	
445	445	X	
450	450	X	
455	455	X	
460	460	X	
470	470	X	
480	480	X	
490	490	X	

**CALIFORNIA ELECTRICAL CODE - CHAPTER 5**  
**Special Occupancies**

Amend Chapter 5 of the 2001 triennial edition of the California Electrical Code as follows  
for publication in the 2004 triennial edition of the California Electrical Code.

Repeal 1999 NEC Article	2002 NEC Article	DSA-SS Adoption	Comments
500	500	X	
501	501	X	
502	502	X	
503	503	X	
504	504		
505	505		
510	510	X	
511	511	X	
513	513	X	
514	514	X	
515	515	X	

516	516	X	
517	517	X	
518	518	X	
520	520	X	
525	525	X	
305	527	X	
530	530	X	
540	540	X	
545	545	X	
547	547	X	
550	550	X	
551	551	X	
552	552	X	
553	553	X	
555	555	X	

#### **CALIFORNIA ELECTRICAL CODE - CHAPTER 6 Special Equipment**

Amend Chapter 6 of the 2001 triennial edition of the California Electrical Code as follows for publication in the 2004 triennial edition of the California Electrical Code.

<b>Repeal 1999 NEC Article</b>	<b>2002 NEC Article</b>	<b>DSA-SS Adoption</b>	<b>Comments</b>
600	600	X	
604	604	X	
605	605	X	
610	610	X	
620	620	X	
625	625	X	
630	630	X	
640	640	X	
645	645	X	
-	647		
650	650	X	
660	660	X	
665	665	X	
668	668	X	

669	669	X	
670	670	X	
675	675	X	
680	680	X	
685	685	X	
690	690	X	
-	692		
695	695	X	

#### **CALIFORNIA ELECTRICAL CODE - CHAPTER 7 Special Conditions**

Amend Chapter 7 of the 2001 triennial edition of the California Electrical Code as follows for publication in the 2004 triennial edition of the California Electrical Code.

<b>Repeal 1999 NEC Article</b>	<b>2002 NEC Article</b>	<b>DSA-SS Adoption</b>	<b>Comments</b>
700	700	X	
701	701	X	
702	702	X	
705	705	X	
720	720	X	
725	725	X	
727	727	X	
760	760	X	
770	770	X	
780	780	X	

#### **CALIFORNIA ELECTRICAL CODE - CHAPTER 8 Communications Systems**

Amend Chapter 8 of the 2001 triennial edition of the California Electrical Code as follows for publication in the 2004 triennial edition of the California Electrical Code.

<b>Repeal 1999 NEC Article</b>	<b>2002 NEC Article</b>	<b>DSA-SS Adoption</b>	<b>Comments</b>
800	800	X	
810	810	X	
820	820		

830	830	X	
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#### **CALIFORNIA ELECTRICAL CODE - CHAPTER 9 Tables**

Amend Chapter 9 of the 2001 triennial edition of the California Electrical Code as follows for publication in the 2004 triennial edition of the California Electrical Code.

Repeal 1999 NEC Table	2002 NEC Table	DSA-SS Adoption	Comments
1	1	X	
4	4	X	
5	5	X	
5A	5A	X	
8	8	X	
9	9	X	
11(A)	11(A)	X	
11(B)	11(B)	X	
12(A)	12(A)	X	
12(B)	12(B)	X	

#### **CALIFORNIA ELECTRICAL CODE - Annex**

Repeal 1999 NEC Appendix	2002 NEC Annex	DSA-SS Adoption	Comments
A	A		
B	B		
C	C		
D	D		Repeal DSA adoption of Appendix D, 1999 edition NEC
E	E		Repeal DSA adoption of Appendix E, 1999 edition NEC

#### **INITIAL STATEMENT OF REASONS**

#### **STATEMENT OF SPECIFIC PURPOSE AND RATIONALE.**

The Division of the State Architect (DSA) proposes to repeal the 1999 edition of the National Electrical Code, and adopt the 2002 edition of the National Electrical Code for effectiveness as the California Electrical Code, 2004 edition. DSA proposes this action in order to comply with state law requiring state agencies to propose for adoption the latest edition model code, within one year of the date of publication of the model code.

#### **TECHNICAL, THEORETICAL, AND EMPIRICAL STUDY, REPORT, OR SIMILAR DOCUMENTS.**

None required.

#### **CONSIDERATION OF REASONABLE ALTERNATIVES.**

The Division of the State Architect has not identified any reasonable alternatives to the proposed action.

#### **REASONABLE ALTERNATIVES THE AGENCY HAS IDENTIFIED THAT WOULD LESSEN ANY ADVERSE IMPACT ON SMALL BUSINESS.**

The Division of the State Architect has not identified any potential adverse impacts on small business as a result of this proposed action.

#### **FACTS, EVIDENCE, DOCUMENTS, TESTIMONY, OR OTHER EVIDENCE OF NO SIGNIFICANT ADVERSE ECONOMIC IMPACT ON BUSINESS.**

The Division of the State Architect has no evidence indicating any potential significant adverse impact on business with regard to the proposed action.

#### **DUPLICATION OR CONFLICTS WITH FEDERAL REGULATIONS.**

The regulations do not duplicate or conflict with federal regulations.

#### **ESTIMATE OF COST OR SAVINGS**

- ◆ Cost or Savings to any state agency: **NO**
- ◆ Cost to any local agency required to be reimbursed under Part 7 (commencing with Section 17500) of Division 4: **NO**
- ◆ Cost to any school district required to be reimbursed under Part 7 (commencing with Section 17500) of Division 4: **NO**
- ◆ Other nondiscretionary cost or savings imposed on local agencies: **NO**
- ◆ Cost or savings in federal funding to the state: **NO**

**INITIAL DETERMINATION OF NO SIGNIFICANT  
STATEWIDE ADVERSE ECONOMIC IMPACT ON  
BUSINESSES**

The Division of the State Architect has made an initial determination that the amendment of these regulations will not have a significant statewide adverse economic impact on businesses, including the ability of California businesses to compete with business in other states.

**DECLARATION OF EVIDENCE**

No facts, evidence, documents, testimony or other evidence has been relied upon to support the initial determination of no effect.

**FINDING OF NECESSITY FOR THE PUBLIC'S HEALTH,  
SAFETY, OR WELFARE**

The proposed action does not require a report by any business or agency, so the Division of the State Architect has not made a finding of necessity for public's health, safety or welfare.

**COST IMPACT ON REPRESENTATIVE PRIVATE PERSON  
OR BUSINESS**

The Division of the State Architect is not aware of any cost impacts that a representative private person or business would necessarily incur in reasonable compliance with the proposed action.

**ASSESSMENT OF EFFECT OF REGULATIONS UPON  
JOBS AND BUSINESS EXPANSION, ELIMINATION OR  
CREATION**

The Division of the State Architect has assessed whether or not and to what extent this proposal will affect the following:

- ♦ The creation or elimination of jobs within the State of California.

The Division of the State Architect has determined that the proposed action has no effect.

- ♦ The creation of new businesses or the elimination of existing businesses within the State of California.

The Division of the State Architect has determined that this proposal has no effect.

- ♦ The expansion of businesses currently doing business with the State of California.

The Division of the State Architect has determined that the proposed action has no effect.

**INITIAL DETERMINATION OF SIGNIFICANT EFFECT ON  
HOUSING COSTS**

The Division of the State Architect has made an initial determination that this proposal WOULD NOT have a significant effect on housing costs. The CBSC contact

designated below will make the Division of the State Architect's evaluation of the effect of the proposed regulatory action on housing costs available upon request.

**STAFF FINDINGS**

None

**ITEM 6 – Committee Recommendations**

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(END OF ITEM)

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## EXPRESS TERMS

### Article 89 – Administration

The Division of the State Architect – Office of Universal Design (DSA-UD) is proposing the adoption of only those sections within Article 89 indicated below and on the attached matrix table. The numbers of each section and all references to these numbers within each section have been reformatted to coincide with the change in the numbering format of the 2002 NEC. Article 89 is an existing California amendment, which provides the purpose, scope, administrative authority, and application to local enforcement agencies. DSA-UD is proposing the amendments of various sections within Article 89 to maintain consistency between other Administrative Chapters within the California Code of Regulations, Title 24.

#### ARTICLE 089 - ADMINISTRATION

**Note: Article 089 has no corresponding Article in the NEC.**

**~~089-1~~ 89.1 Title.** The provisions contained in this Code shall be known as the "California Electrical Code," a portion of the "California Building Standards Code," as defined in the "California Building Standards Law" commencing with Section 18901 of the Health and Safety Code, and may be cited and referred to as the "California Electrical Code." The unqualified words "This Code" as used herein, refer only to the California Electrical Code, and do not include any other portions of the California Building Standards Code. These provisions may also be cited as "CEC." or "Part 3" within other parts of the California Building Standards Code (Title 24).

**~~089-2~~ 89.2 Purpose.** The purpose of this Code is to provide minimum standards to safeguard life or limb, health, property, and public welfare, and to protect against hazards that may arise from the use of electricity by regulating and controlling the design, construction, installation, quality of materials, location, and operation of electrical equipment, wiring, and systems.

**NOTE:** [For DSA/AC] The purpose of this code is to ensure that barrier-free design is incorporated in all buildings, facilities, site work and other developments to which this code applies and to ensure that they are accessible to and usable by persons with disabilities.

**~~089-3~~ 89.3 Scope.** The provisions of the Code and the building standards contained herein, including those standards adopted by reference without amendments, where specifically adopted by the listed agencies under their cited authority and enforced by the enforcing agency specified in Section ~~0897~~ 89.7, shall apply to the

construction, alteration, moving, demolition, repair, and use of all electrical equipment, wiring, and systems in or on any building or structure or outdoors on any premise or property; except such electrical equipment, wiring and systems which are expressly exempted by Section ~~089-4~~ 89.4.

**Exception:** ~~Additions, Alterations, Repairs, and Moved Buildings. Notwithstanding other provisions of law, alterations, repairs, replacements, and moved buildings are governed by Health and Safety Code, Division 13, Part 1.5, Sections 17912, 17920.3, 17922(c), 17922.3, 17958.8, and 17958.9, known as the State Housing Law, and are implemented by the California Code of Regulations, Title 25, Chapter 1. Health and Safety Code Sections 17958.8 and 17958.9 are repeated here for clarity and read as follows:~~

~~(a) Section 17958.8. "Local ordinances or regulations governing alterations and repair of existing buildings shall permit the replacement, retention, and extension of original materials and the use of original methods of construction as long as the hotel, lodging house, motel, apartment house, or dwelling, or portions thereof, or building and structure accessory thereto, 2001 California Electric Code complies with the provisions published in the State Building A Standards Code and the other rules and regulations of the A department or alternative local standards adopted pursuant C to Section 17920.7 and does not become or continue to be a substandard building. "~~

~~(b) Section 17958.9. "Local ordinances or regulations governing the moving of apartment houses and dwellings shall, after July 1, 1978, permit the retention of existing materials and methods of construction so long as the apartment house or dwelling complies with the building standards for foundation applicable to new construction, and does not become or continue to be a substandard building. "~~

**~~089-4. 89.4 Exempted from this Code.~~** This Code does not cover:

~~(a) (A) Installations in ships, watercraft other than floating dwelling units, railway rolling stock, aircraft, automotive vehicles, commercial coaches, mobile homes, and recreational vehicles.~~

~~(b) (B) Installations underground in mines, mine shafts, and tunnels.~~

~~(c) (C) Installations of railways for generation, transformation, transmission, or distribution of power used exclusively for operation of rolling stock or installations used exclusively for signaling and communication purposes.~~

~~(d) (D) Installation of communication equipment under the exclusive control of communication utilities, located~~

outdoors or in building spaces used exclusively for such installations.

~~(e)~~ **(E)** Installations under the exclusive control of electrical utilities for the purpose of communication or metering; or for the generation, control, transformation, transmission, and distribution of electrical energy located in buildings used exclusively by utilities for such purposes or located outdoors on property owned or leased by the utility or on public highways, streets, roads, etc., or outdoors by established rights on private property.

**Exception to ~~(d)~~ (D) and ~~(e)~~ (E):** In places of employment, the following shall apply: installations of conductors, equipment, and associated enclosures subject to the jurisdiction of the California Public Utilities Commission, that are owned, operated, and maintained by an electric, communications, or electric railway utility, but not including conduit, vaults, and other like enclosures containing conductors and equipment of such a utility when located indoors or on premises not used exclusively for utility purposes, but do not apply to the utility's conductors and equipment therein.

~~(f)~~ **(F)** Installations on highways or bridges.

#### **~~089-5.~~ 89.5 Non-Building Standards, Orders and Regulations.**

~~(a)~~ **(A)** Requirements contained in the National Electrical Code (NEC), or in any other referenced code, document, or standard, which are not building standards as defined in Section 18912 of the Health and Safety Code, shall not be construed as a part of the provisions of this Code.

~~(b)~~ **(B)** For the applicability of regulations, safety, and other orders, and standards which relate to the administration, enforcement, maintenance, operation, and similar non-building standards, see other titles of the California Code of Regulations.

#### **~~089-6.~~ 89.6 Order of Precedence and Use.**

~~(a)~~ **(A)** In the event of any difference between the provisions of this Code and the National Electrical Code (NEC), or between this Code and the provisions of any other referenced code, document, or standard, the text of this Code shall govern. Where a specific provision varies from a general provision, the specific provisions shall apply.

~~(b)~~ **(B)** If a section of this Code makes a cross-reference to another section or table in the National Electrical Code (NEC), such cross-referencing shall be interpreted to mean that which is shown in the NEC unless the referenced section or table has been amended or modified in this Code for the particular enforcing agency.

~~(c)~~ **(C)** If a section in the National Electrical Code (NEC) makes a cross-reference to another section or table in the

NEC, such cross-referencing shall be interpreted to mean that which is shown in the NEC unless the referenced section or table has been amended or modified in this Code or the particular enforcing agency.

~~(d)~~ **(D)** when adopted by a State agency, and approved by the Commission, the text of amended provisions contained in this Code shall take precedence over the corresponding provisions of the National Electrical Code (NEC).

**~~089-6.1~~ 89.6.1 Local Variances.** For clarification purposes, the applicable Health & Safety Code Section 17958.5 is repeated here and reads as follows:

Section 17958.5. "Except as provided in Section 17922.6 to adopting the ordinances or regulations pursuant to Section 17958, a city or county may make such changes or modifications in the requirements contained in the provisions published in the California Building Standards Code and the other regulations adopted pursuant to Section 17922 as it determines, pursuant to the provisions of Section 17958.7, are reasonably necessary because of local climatic, geological, or topographical conditions.

"For purposes of this subdivision, a city and county may make reasonably necessary modifications to the requirements, adopted pursuant to Section 17922, contained in the provisions of the code and regulation on the basis of local conditions. "

**~~089-6.2~~ 89.6.2 Findings, Filing, and Rejections of Local Variances.** For clarification purposes, the applicable subsection of Health & Safety Code Section 17958.7 is repeated here and reads as follows:

Section 17958.7

**(a)** "Except as provided in Section 17922.6, the governing body of a city or county, before making any modifications or changes pursuant to Section 17958.5, shall make an express finding that such modifications or changes are reasonably necessary because of local climatic, geological or topographical conditions. Such a finding shall be available as a public record. A copy of those findings, together with the modification or change expressly marked and identified to which each finding refers shall be filed with the California Building Standards Commission. No modification or change shall become effective or operative for any purpose until the finding and the modification or change have been filed with the California Building Standards Commission."

**(b)** "The California Building Standards Commission may reject a modification or change filed by the governing body of a city or county if no finding was submitted."

#### **~~089-7.~~ 89.7 Application.**

**5. DSA/AC-Division of the State Architect, Access Compliance.**

**General.** To assure that barrier free design is incorporated in all buildings, facilities, site work, and other improvements to which this code applies; to assure that these improvements are accessible to and usable by physically disabled persons. Additions, alterations, and structural repairs in all buildings and facilities shall comply with these provisions for new buildings, except as otherwise provided and specified herein. The provisions of these regulations shall apply to any portable buildings leased or owned by a school district, and shall also apply to temporary and emergency buildings and facilities. In addition, to incorporate standards at least as restrictive as those required by the federal government for barrier-free design under (1) Title III (Public Accommodations and Commercial Facilities), Subpart D (New Construction and Alteration) and Appendix A (Americans with Disabilities Act Accessibility Guidelines) (see 28 S.F.R. Part 36), and (2) Title II (Public Entities), Section 35.151 (New Construction and Alterations) (see 28 C.F.R., Part 35) both from the Americans with Disabilities Act of 1990, and (3) under the Fair Housing Amendments of 1988. Some of these regulations may be more stringent than state law in order to meet the federal requirement.

**A. Application-** Publicly-Funded Buildings, Structures, Sidewalks, Curbs, and Related Facilities shall be accessible to and usable by persons with where access for people with physical disabilities as follows: is required to areas designated in Part 2 of Title 24.

**Note:** See Government Code, commencing with Section 4450.

(1) All buildings, structures, sidewalks, curbs, and related facilities constructed in the state by the use of State, county, or municipal funds, or the funds of any political subdivision of the State.

(2) All buildings, structures, and facilities, ~~occupied 50 percent or more, which that~~ are leased, rented, contracted, sublet, or hired ~~for periods in excess of two years~~ by any municipal, county, or State division of government or by a special district. ~~The determination as to whether the building, structure, or facility is occupied 50 percent or more shall be based upon the usable floor areas as defined in Part 2 of this code.~~

~~(3) All publicly-funded living accommodations.~~

~~(4) (3) All publicly-funded buildings used for congregate residences or for one- or two-family dwelling unit purposes shall conform to the appropriate provisions applicable to living accommodations.~~

~~(5) (4) All existing publicly funded buildings and facilities when alterations, structural repairs or additions are made to such buildings or facilities. For detailed requirements on existing buildings, see California Code of Regulations, Title 24, Part 2, Chapter 11B, Division IV. This requirement shall apply only to the area of specific~~

~~alteration, structural repair, or addition and shall include those areas listed below:~~

~~(a) A primary entrance to the building or facility and the primary path of travel to the specific area of alteration, structural repair, or addition.~~

~~(b) Sanitary facilities, drinking fountains, and public telephones serving the area.~~

**Exception No. 1** When the total construction cost of alterations, structural repairs or additions does not exceed a valuation threshold of \$50,000, based on January 1981, "ENR US-20 Cities" average construction cost index of 3372.02 ("Engineering News-Record," McGraw-Hill Publishing Co.), and the enforcing agency finds that compliance with this Code creates an unreasonable hardship, compliance shall be limited to the actual work of the project.

The enforcing agency shall, annually, update the valuation threshold to a current amount based on the increase in the index since the last figure used.

**Exception No. 2:** Alterations, structural repairs or additions consisting of one of the following shall be limited to the actual work of the project:

- a. Altering one building entrance to meet handicapped/physically disabled requirements.
- b. Altering one existing toilet facility to meet handicapped/physically disabled requirements.
- c. Altering existing elevators to meet handicapped/physically disabled requirements.
- d. Altering existing steps to meet handicapped/physically disabled requirements.
- e. Altering existing handrails to meet handicapped/physically disabled requirements.

**Exception No. 3:** Projects which consist only of heating, ventilation, air conditioning, reroofing, electrical work not involving placement of switches and receptacles, cosmetic work that does not affect access, such as painting, carpeting, etc., are not considered alteration projects for purposes of accessibility for the handicapped/people with physical disabilities and shall not be subject to DSA/AC requirements.

(5) With respect to buildings, structures, sidewalks, curbs and related facilities not requiring a building permit, building standards published in the California Building Standards Code relating to access for persons with disabilities and other regulations adopted pursuant to Government Code Section 4450, and in effect at the time construction is commenced, shall be applicable.

**B. Application.** All Privately Funded Public Accommodations as defined, and commercial facilities, as defined, and Facilities where access for people with shall be accessible to persons with physical disabilities as follows: is required to areas designated in Part 2 or Title 24.



**Note:** See Health and Safety Code, commencing with Section 19952.

**Exception:** See California Code of Regulations, Title 24, Part 2, Section 1103B.1, for types of privately funded multistory buildings, which do not require installation of an elevator or provide access above and below the first floor.

(1) Any building, structure, facility, complex, or improved area or portion thereof which is used by the general public, and shall include:

- a. Auditoriums, convention centers, and stadiums.
- b. Hospitals, including but not limited to, hospitals, nursing homes, and convalescent homes.
- c. Theaters, restaurants, and shopping centers.
- d. Hotels and motels.
- e. Passenger vehicle service stations.
- f. Offices of physicians and surgeons.
- g. Office buildings.
- h. Public curbs and sidewalks.

(2) Any sanitary facilities which are made available for the public, clients, or employees in such accommodations or facilities.

(3) Any curb or sidewalk intended for public use that is constructed in this State with private funds.

(4) All existing privately funded public accommodations when alterations, structural repairs, or additions are made to such public accommodations as set forth in the California Code of Regulations, Title 24, Part 2, Chapter 11B.

~~**Exception No. 1:** In privately funded multi-storied passenger vehicle service stations, shopping centers, offices of physicians and surgeons, and office buildings, subject to this code, floors or levels above and below the first floor or ground level are exempt from these requirements if a ramp or elevator is not available to provide public access to such floors or levels.~~

~~**Exception No. 2:** In privately funded multi-storied buildings, floors or levels above the first floor or ground level are exempt from these requirements if a reasonable portion of all facilities and accommodations normally sought and used by the public in such a building are accessible to and usable by physically handicapped persons/people with physical disabilities.~~

- C. **Application.** Public housing and private housing available for public use.

**Note:** See Government Code Sections 4450 and 12955.1(d).

**C. D. Enforcing Agency:**

(1) ~~By the~~ The Director of General Services where State

funds are utilized for any projector where funds of counties, municipalities, or other political subdivisions are utilized for the construction of elementary; secondary, or community college projects.

(2) ~~By the~~ The governing bodies thereof where funds of counties, municipalities, or other political subdivisions are utilized except as otherwise provided above.

(3) ~~By the~~ The building department of every city, county, or city and county, within the territorial area of its city, county, or city and county, where private funds are utilized. "Building department" means the department, bureau, or officer charged with the enforcement of laws or ordinances regulating the erection or construction, or both the erection and construction, of buildings.

**D. E. Special Conditions for the Physically Handicapped Persons With Disabilities Requiring Appeals Action Ratification:** Whenever reference is made in these regulations to this section, the findings and determinations required to be rendered by the local enforcing agency shall be subject to ratification through an appeals process.

**E. F. Authority Cited-** Government Code Section 4450 and Health and Safety Code 18949.1.

**F. G. Reference-** Government Code Sections 4450 through 4458 4460, 12955.1, and Health and Safety Code Sections 18949.1, 19952 through 19959.

**Article 90 – Introduction**

The Division of the State Architect – Office of Universal Design (DSA-UD) is proposing not to adopt Article 90 of the 2002 NEC.

**CHAPTER 1: General, Articles 100-110**

The Division of the State Architect – Office of Universal Design (DSA-UD) is proposing not to adopt Articles 100-110 of the 2002 NEC.

**CHAPTER 2: Wiring and Protection, Articles 200-285**

The Division of the State Architect – Office of Universal Design (DSA-UD) is proposing not to adopt Articles 200-285 of the 2002 NEC.

**Note:** In the 2002 Edition of the NEC, Section 210-7 was revised and relocated to Section 406.3. California amendment Section 210-7(g) has been renumbered and relocated with modification to Section 406.3(G).

**Article 210 – Branch Circuits**

**General Provisions**

**210-7. Receptacles and Cord Connectors.**

~~(g) [For DSA/AC] Installation Height. Where access for people with physical disabilities is required by Article 089-7-89.7, the center of receptacle outlets on branch circuits of 30 amperes or less shall be installed not more than 48 inches nor less than 15 inches above the floor or working platform.~~

~~**Exception No. 1:** Receptacle outlets installed, as a permanently installed baseboard heaters are exempt.~~

~~**Exception No. 2:** Required receptacle outlets shall be permitted in floors when adjacent to sliding panels or walls.~~

~~**Exception No. 3:** Baseboard electrical outlets used in relocatable partitions, window walls, or other electrical convenience floor outlets are not subject to the minimum height requirements.~~

~~**Exception No. 4:** This section shall not apply to existing buildings when the enforcing agency determines that compliance with these standards would create an unreasonable hardship.~~

### **CHAPTER 3: Wiring Methods and Materials-Articles 300-398**

The Division of the State Architect – Office of Universal Design (DSA-UD) is proposing not to adopt Articles 300-398 of the 2002 NEC.

**Note:** In the 2002 Edition of the NEC, Section 380-8 was revised and relocated to Section 404. California amendment Section 380-8(c) has been renumbered and relocated with modification to Section 404-8(C)

#### **Article 380 – Switches**

##### **380-8 Accessibility and Grouping**

~~(1) **[DSA/AC] – Installation** Where access for people with physical disabilities is required by Article 89.7, the center of the grip of the operating handle of controls or switches intended to be used by the occupant of the room or area to control lighting and receptacle outlets, appliances or cooling, heating and ventilating equipment, shall be not more than 48 inches (1219 mm) above the floor or working platform.~~

### **CHAPTER 4: Equipment-Articles 400-402, 407-490**

The Division of the State Architect – Office of Universal Design (DSA-UD) is proposing not to adopt Articles 400-402 and 406-490. DSA-UD adopts a California amendment to NEC Article 404 for Installation Height of switches, Section 404 (C). DSA-UD adopts a California amendment to NEC Article 406 for Installation Heights of receptacles, cord connectors and attachment plugs, Section 406.3(G).

#### **Article 404 – Switches**

##### **I. Installation**

##### **404.8 Accessibility and Grouping**

##### **(C) Installation Height**

##### **380-8(c)**

##### **[For DSA/AC] - Installation Controls and Switches.**

~~Where access for people with physical disabilities is required by Article 89.7, the center of the grip of the operating handle of Controls or switches intended to be used by the occupant of the room or area to control~~

~~lighting and receptacle outlets, appliances or cooling, heating and ventilating equipment, shall be 48 inches (1219 mm) maximum measured to the top of the receptacle outlet box above the level of the finished floor, working platform, ground surface, or sidewalk and 15 inches (381 mm) minimum measured to the bottom of the receptacle outlet box.~~

### **Article 406 -- Receptacles, Cord Connectors, and Attachment Plugs (Caps)**

#### **406.3 General Installation Requirements.**

##### **406.3(G) Installation Heights.**

##### **210-7(g)**

##### **[DSA/AC] - Receptacles Installation Heights.**

~~Where access for people with physical disabilities is required by Article 89.7 the center of Electrical receptacle outlets on branch circuits of 30 amperes or less and communication system receptacles shall be installed 48 inches (1219 mm) maximum measured to the top of the receptacle outlet box, and 15 inches (381 mm) minimum measured to the bottom of the receptacle outlet box, above the level of the finished floor or working platform, ground surface, or sidewalk.~~

**Exception No. 1:** Receptacle outlets installed as part of permanently installed baseboard heaters are exempt.

**Exception No. 2:** Required receptacle outlets shall be permitted in floors when adjacent to sliding panels or walls.

**Exception No. 3:** Baseboard electrical outlets used in relocatable partitions, window walls or other electrical convenience floor outlets are not subject to the minimum height requirements.

**Exception No. 4:** This section shall not apply to existing buildings when the enforcing agency determines that compliance with these standards would create an unreasonable hardship.

**Exception No. 5:** In a commissary, which services food, preparation units refer to the installation height requirements adopted by the Department of Health Services, California Electrical Code.

### **CHAPTER 5: Special Occupancies, Articles 500-555**

The Division of the State Architect – Office of Universal Design (DSA-UD) is proposing not to adopt Articles 500-555 of the 2002 NEC.

### **CHAPTER 6: Special Equipment, Articles 600-695**

The Division of the State Architect – Office of Universal Design (DSA-UD) is proposing not to adopt Articles 600-695 of the 2002 NEC.

## **CHAPTER 7: Special Conditions, Articles 700-727 and 780**

The Division of the State Architect – Office of Universal Design (DSA-UD) is proposing not to adopt Articles 700-727 and 780. DSA-UD is proposing to adopt the entire NEC Articles 760 and 770 by reference with a California amendment to Section 760.16. The entire Articles 760 and 770 are adopted by reference in the California Code of Regulations, Title 24, Part 2, Chapter 35, Section 3505.1.

### **Article 760 – Fire Alarm Systems**

**Note:** *[For DSA/AC] Article 760 is adopted by reference in the California Code of Regulations, Title 24, Part 2, Chapter 35, Section 3505.*

#### **General**

**760.16 [For DSA/AC] Fire Alarm Installation Heights of Manual Pull Stations.** *The center of fire alarm manual pull stations shall be located 48 inches above the level of the floor, working platform, ground surface, or sidewalk.*

**Exception:** *Enforcement officials shall not retroactively require fire alarm initiating devices be relocated to a 48-inch height.*

### **Article 770 – Optical Fiber Cables and Raceways**

**Note:** *[For DSA/AC] Article 770 is adopted by reference in the California Code of Regulations, Title 24, Part 2, Chapter 35, Section 3505.*

## **CHAPTER 8: Communication Systems, Articles 810-830**

The Division of the State Architect – Office of Universal Design (DSA-UD) is proposing not to adopt Articles 810-830. DSA-UD is proposing to adopt the entire NEC Article 800 by reference with a California amendment to Article 800. The entire Article 800 is adopted by reference in the California Code of Regulations, Title 24, Part 2, Chapter 35, Section 3505.1.

### **Article 800 – Communications Circuits**

**Note:** *[For DSA/AC] Article 800 is adopted by reference in California Code of Regulations, Title 24, Part 2, Chapter 35, Section 3505.*

## **CHAPTER 9: Tables**

The Division of the State Architect – Office of Universal Design (DSA-UD) is proposing not to adopt Chapter 9-Tables of the 2002 NEC.

### **ANNEXES:**

The Division of the State Architect – Office of Universal Design (DSA-UD) is proposing not to adopt Annexes A, B, C, D, E, and F of the 2002 NEC.

**DSA/AC MATRIX ADOPTION TABLE**

<b>1999 NEC Code Section<sup>1</sup></b>	<b>2002 NEC Code Section</b>	<b>Department Adoption</b>	<b>Comments</b>
<b>State Article 089 Administration</b>	<b>State Article 89 Administration</b>		
089-1	89.1	x	Renumbered to 89.1
089-2	89.2	x	Renumbered to 89.2 & adopt a 2 <sup>nd</sup> paragraph
089-3	89.3	x	Renumber to 89.3
089-4	89.4	x	Renumber to 89.4
089-5	89.5	x	Renumber to 89.5
089-6	89.6	x	Renumber to 89.6
089-6.1	89.6.1	x	Renumber to 89.6.2
089-6.2	89.6.2	x	Renumber to 89.6.2
089-7 – Item 5	89.7-Item 5	x	Renumber to 89.7 and amend to be consistent with other Administrative chapters within CCR, Title 24.

<b>1999 NEC Code Section<sup>1</sup></b>	<b>2002 NEC Code Section</b>	<b>Department Adoption</b>	<b>Comments</b>
<b>Chapter 2. Wiring and Protection, Articles 200-280</b>	<b>Chapter 2. Wiring and Protection, Articles 200-285</b>		
Article 210 – Branch Circuits, Section 210-7 – Receptacles and Cord Connectors, Subsection 210-7(g) CA -- Installation			Relocated to 406.3(G), see Chapter 4

<b>Chapter 3 Wiring Methods and Materials Articles 300-384</b>	<b>Chapter 3 Wiring Methods and Materials Articles 300-398</b>		<i>Comments</i>
Article 346 – Rigid Metal Conduit			
Article 380 – switches, Section 380-8 – Accessibility Grouping, Subsection 380-8(c) – Installation			Relocated to 404, see Chapter 4

1999 NEC Code Section <sup>1</sup>	2002 NEC Code Section	Department Adoption	Comments
<b>Chapter 4 Equipment for General Use Articles 400-490</b>	<b>Chapter 4 Equipment for General Use Articles 400-390</b>		
	Article 404 – Switches, <b>Section 404.8 – Accessibility and</b> Grouping, Subsection 404.8(C) – Installation Height	X	CA amendment was relocated from 380-8(c)
	Article 406 – Receptacles, Cord Connectors, and Attachment Plugs (Caps), Section 406.3 – General Installation Requirements, Subsection 406.3(G) CA – Installation Heights	X	CA amendment was relocated from 210-7(g)

1999 NEC Code Section <sup>1</sup>	2002 NEC Code Section	Department Adoption	Comments
<b>Chapter 5 Special Occupancies Articles 500-555</b>	<b>Chapter 5 Special Occupancies Articles 500-555</b>		
Article 540 – Motion Picture Projectors			Deleted

<b>1999 NEC Code Section<sup>1</sup></b>	<b>2002 NEC Code Section</b>	<b>Department Adoption</b>	<b>Comments</b>
<b>Chapter 7 Special Occupancies Articles 700-780</b>	<b>Chapter 7 Special Occupancies Articles 700-780</b>		
	Article 760 – Fire Alarm Systems	X Adopt as amended by SFM	This article is adopted by reference in CCR, T-24, Pt 2, Chapter 35, Sec. 3505.1, under amending section 1.5.5.4 of NFPA 72.
Article Fire Alarm Systems, Section 760.16 Installation Heights of Manual Stations	Article 760 – Fire Alarm Systems, Section 760.16 Installation Heights of Manual Stations	X	CA amendment
	Article 770 - Optical Fiber Cables and Raceways	X Adopt as amended by SFM	This article is adopted by reference in CCR, T-24, Pt 2, Chapter 35, Sec. 3505.1, under amending section 1.5.5.4 of NFPA 72.
<b>1999 NEC Code Section<sup>1</sup></b>	<b>2002 NEC Code Section</b>	<b>Department Adoption</b>	<b>Comments</b>
<b>Chapter 8 Communications Systems Articles 800-830</b>	<b>Chapter 8 Communications Systems Articles 800-830</b>		
	Article 800 – Communications Circuits - Note	X Adopt as amended by the SFM	This article is adopted by reference in CCR, T-24, Pt 2, Chapter 35, Sec. 3505.1, under amending section 1.5.5.4 of NFPA 72.

## INITIAL STATEMENT OF REASONS

### **STATEMENT OF SPECIFIC PURPOSE AND RATIONALE**

(Government Code Section 11346.2 requires a statement of specific purpose of **EACH** adoption, amendment, or repeal and the rational the determination by the agency that **EACH** adoption, amendment, or repeal is reasonably necessary to carry out the purpose for which it is proposed.)

#### **Part 3:**

##### **Article 80 – Administration and Enforcement**

The Division of the State Architect – Office of Universal Design (DSA/UD) is proposing not to adopt Article 80 of the 2002 NEC. The DSA-UD has an existing California Amendment, Article 89 – Administration, which provides a standardized set of rules for local enforcement agencies in California.

##### **Article 89 – Administration**

The DSA/UD is proposing the adoption of only those sections within Article 89 indicated below and on the attached matrix table. The numbers of each section and all references to these numbers within each section have been reformatted to coincide with the change in the numbering format of the 2002 NEC. Article 89 is an existing California amendment, which provides the purpose, scope, administrative authority, and application to local enforcement agencies. DSA/UD is proposing the amendments of various sections within Article 89 to maintain consistency between other Administrative Chapters within the California Code of Regulations, Title 24.

##### **Article 90 – Introduction**

The Division of the State Architect – Office of Universal Design (DSA-UD) is proposing not to adopt Article 90 of the 2002 NEC.

#### **CHAPTER 1: General, Articles 100-110**

The Division of the State Architect – Office of Universal Design (DSA-UD) is proposing not to adopt Articles 100-110 of the 2002 NEC.

#### **CHAPTER 2: Wiring and Protection, Articles 200-285**

The DSA/UD) is proposing not to adopt Articles 200-285 of the 2002 NEC.

In the 2002 Edition of the NEC, Section 210-7 was revised and relocated to Section 406.3. California amendment Section 210-7(g) has been renumbered and relocated with modification to Section 406.3(G). The regulation in 210-7(g) is relocated to CCR, Title 24, Part 2. A note is left in 406.3(G) referring user to CCR, Title 24, Part 2.

#### **CHAPTER 3: Wiring Methods and Materials -Articles 300-398**

The Division of the State Architect – Office of Universal Design (DSA-UD) is proposing not to adopt Articles 300-398 of the 2002 NEC.

In the 2002 Edition of the NEC, Section 380-8 was revised and relocated to Section 404. California amendment Section 380-8(c) has been renumbered and relocated with modification to Section 404-8(C).

#### **CHAPTER 4: Equipment-Articles 400-402, 407-490**

The DSA/UD is proposing not to adopt Articles 400-402 and 406-490. DSA/UD adopts a California amendment to NEC Article 404 for Installation Height of Switches, Section 404 (C). DSA/UD adopts a California amendment to NEC Article 406 for Installation Heights of Receptacles, Cord Connectors and Attachment Plugs, Section 406.3(G).

#### **CHAPTER 5: Special Occupancies, Articles 500-555**

The DSA/UD) is proposing not to adopt Articles 500-555 of the 2002 NEC.

#### **CHAPTER 6: Special Equipment, Articles 600-695**

The DSA/U) is proposing not to adopt Articles 600-695 of the 2002 NEC.

#### **CHAPTER 7: Special Conditions, Articles 700-727 and 780**

The DSA/UD is proposing not to adopt Articles 700-727 and 780. DSA/UD is proposing to adopt the entire NEC Articles 760 and 770 by reference with a California amendment to Section 760.16. The entire Articles 760 and 770 are adopted by reference in the California Code of Regulations, Title 24, Part 2, Chapter 35, Section 3505.1.

#### **CHAPTER 8: Communication Systems, Articles 810-830**

The DSA/UD) is proposing not to adopt Articles 810-830. DSA/UD is proposing to adopt the entire NEC Article 800 by reference with a California amendment to Article 800. The entire Article 800 is adopted by reference in the California Code of Regulations, Title 24, Part 2, Chapter 35, Section 3505.1.

#### **CHAPTER 9: Tables**

The DSA/UD is proposing not to adopt Chapter 9-Tables of the 2002 NEC.

#### **ANNEXES:**

The DSA/UD is proposing not to adopt Annexes A, B, C, D, E, and F of the 2002 NEC.

#### **TECHNICAL, THEORETICAL, AND EMPIRICAL STUDY, REPORT, OR SIMILAR DOCUMENTS:**

In proposing these adoptions, amendments, or repeals of electrical standards into Title 24, Part 3, DSA/UD used NFPA 70 National Electrical Code 2002 Edition as prepared by the National Electrical Code Committee and acted on by the National Fire Protection Association, Inc. at its May Association Technical Meeting held May 13—17, 2001, in Anaheim, CA. Issued by the Standards Council on July 13, 2001, with an effective date of August 2, 2001, and which supersedes all previous editions. This edition of the NFPA 70 was approved as an American National Standard on August 2, 2001.

#### **CONSIDERATION OF REASONABLE ALTERNATIVES**

The DSA/UD has determined that no alternatives would be more effective in carrying out the purpose for which electrical requirements for accessibility are proposed or would be effective and less burdensome to affected private persons than the proposed regulations.

#### **REASONABLE ALTERNATIVES THE AGENCY HAS IDENTIFIED THAT WOULD LESSEN ANY ADVERSE IMPACT ON SMALL BUSINESS.**

The DSA/UD has not identified any alternatives that would lessen any adverse impact on small business for which electrical requirements for accessibility are proposed. This regulation is not intended to impact small business. This regulation is intended to provide electrical requirements for accessibility.

#### **FACTS, EVIDENCE, DOCUMENTS, TESTIMONY, OR OTHER EVIDENCE OF NO SIGNIFICANT ADVERSE ECONOMIC IMPACT ON BUSINESS.**

The DSA/UD finds that provisions for electrical requirements for accessibility would not have a significant adverse impact on business. These regulations are not intended to have an adverse economic impact on business. This regulation is intended to provide electrical requirements for accessibility.

#### **DUPLICATION OR CONFLICTS WITH FEDERAL REGULATIONS**

N/A

The DSA/UD is within the State and Consumer Services Agency, Department of General Services. DSA-UD is only aware of the following existing Federal provisions of the Americans with Disabilities Act (ADA) Accessibility Guidelines for Buildings and Facilities, as published in the Federal Register July 26, 1991, Section 4.27 Controls and Operating Mechanisms.

#### **STAFF FINDINGS**

All references to future editions of state codes should be made with caution. Future editions of T-24 have not yet

been identified, and are subject to change.

#### **ITEM 7 – Committee Recommendations**

A            AA            D            FS

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(END OF ITEM)



## EXPRESS TERMS

### ARTICLE 089 Administration

OSHDP will continue to adopt entire State Article 089

### ARTICLE 110 Requirements for Electrical Installations

#### 110.13 Mounting and Cooling of Equipment.

**(A) Mounting.** Electrical equipment shall be firmly secured to the surface on which it is mounted. Wooden plugs driven into holes in masonry, concrete, plaster, or similar materials shall not be used.

**(B) Cooling.** Electrical equipment that depends on the natural circulation of air and convection principles for cooling of exposed surfaces shall be installed so that room airflow over such surfaces is not prevented by walls or by adjacent installed equipment. For equipment designed for floor mounting, clearance between top surfaces and adjacent surfaces shall be provided to dissipate rising warm air. Electrical equipment provided with ventilating openings shall be installed so that walls or other obstructions do not prevent the free circulation of air through the equipment.

**(C) [For OSHDP 1, 2, & 4] Hospitals.** *Electrical equipment and its supporting structure installed in hospital buildings shall be anchored and braced to withstand the lateral forces, and shall accommodate calculated displacements as required by Part 2, Title 24, C.C.R.*

**110.26 Spaces About Electrical Equipment.** Sufficient access and working space shall be provided and maintained about all electric equipment to permit ready and safe operation and maintenance of such equipment. Enclosures housing electrical apparatus that are controlled by lock and key shall be considered accessible to qualified persons.

**(F) Dedicated Equipment Space.** All switchboards, panel boards, distribution boards, and motor control centers shall be located in dedicated spaces and protected from damage.

**Exception No. 1:** *Control equipment that by its very nature or because of other rules of the Code must be adjacent to or within sight of its operating machinery shall be permitted in those locations.*

**Exception No. 2:** *[For OSHDP 1, 2, & 4] Wall spaces in patient care rooms shall not be used for the installation of switchboards and panel boards, unless dedicated for that room.*

**(1) Indoor.** Indoor installations shall comply with 110.26(F)(1)(a) through (d).

**(a) Dedicated Electrical Space.** The space equal to the width and depth of the equipment and extending from the floor to a height of 1.8 m (6 ft) above the equipment or to the structural ceiling, whichever is lower, shall be dedicated to the electrical installation. No piping, ducts, leak protection apparatus, or other equipment foreign to the electrical installation shall be located in this zone.

Exception: Suspended ceilings with removable panels shall be permitted within the 1.8-m (6-ft) zone.

**(b) Foreign Systems.** The area above the dedicated space required by 110.26(F)(1)(a) shall be permitted to contain foreign systems, provided protection is installed to avoid damage to the electrical equipment from condensation, leaks, or breaks in such foreign systems.

**(c) Sprinkler Protection.** Sprinkler protection shall be permitted for the dedicated space where the piping complies with this section.

**(d) Suspended Ceilings.** A dropped, suspended, or similar ceiling that does not add strength to the building structure shall not be considered a structural ceiling.

**(2) Outdoor.** Outdoor electrical equipment shall be installed in suitable enclosures and shall be protected from accidental contact by unauthorized personnel, or by vehicular traffic, or by accidental spillage or leakage from piping systems. The working clearance space shall include the zone described in 110.26(A). No architectural appurtenance or other equipment shall be located in this zone.

### ARTICLE 352 Rigid Nonmetallic Conduit: Type RNC

**NOTE: Relocating the following OSHDP Amendment from Section 347-3(g) to Section 352.12(G)**  
**347-3. 352.12 Uses Not Permitted.** RNC shall not be used in the following locations:

....

**(F) Theaters and Similar Locations.** In theaters and similar locations, except as provided in Articles 518 and 520.

**(G) [For OSHDP 1, 2, 3 & 4]** *For branch circuits in-patient care areas of hospitals, nursing homes, clinics, and correctional treatment centers, ~~and other health~~*

care facilities.

#### ARTICLE 362

##### Electrical Nonmetallic Tubing: Type ENT

**NOTE: Relocating the following OSHPD Amendment from Section 331-4(10), to Section 362.12(11) ~~331-4. 362.12~~ Uses Not Permitted.** ENT shall not be used in the following:

....

- (10) Where subject to physical damage
- (11) **[For OSHPD 1, 2, 3, & 4]** For branch circuits in-patient care areas of hospitals, nursing homes, clinics, and correctional treatment centers.

#### ARTICLE 380

##### Multioutlet Assembly

**NOTE: Relocating the following OSHPD Amendment from Section 353-2(b)7 to Section 380(B)(7) ~~353-2. 380.2(B)~~ Not Permitted.** A multioutlet assembly shall not be installed as follows:

....

- (6) In any hazardous (classified) locations except Class I, Division 2 locations as permitted in 501.4(B)(3)
- (7) **[For OSHPD 1, 2, 3, & 4]** Nonmetallic multioutlet assembly shall not be used in patient care areas of hospitals, nursing homes, clinics, and correctional treatment centers.

#### ARTICLE 382

##### Nonmetallic Extensions

**NOTE: Relocating the following OSHPD Amendment from Section 342-4(f) to Section 382.12(5) ~~342-4. 382.12~~ Uses Not Permitted.** Nonmetallic extensions shall not be used as follows:

....

- (4) Where run through a floor or partition, or outside the room in which it originates
- (5) **[For OSHPD 1, 2, 3, & 4]** For branch circuits in-patient care areas of hospitals, nursing homes, clinics, and correctional treatment centers.

#### ARTICLE 388

##### Surface Nonmetallic Raceways

**NOTE: Relocating the following OSHPD Amendment from Section 352-22(b)(8) to Section 388.12(8) ~~352-22. 388.12~~ Uses Not Permitted.** Surface nonmetallic raceways shall not be used in the following:  
....

- (7) For conductors whose insulation temperature limitations would exceed those for which the nonmetallic raceway is listed
- (8) **[For OSHPD 1, 2, 3, & 4]** Surface nonmetallic raceways shall not be used for branch circuits in patient care areas of hospitals, nursing homes, clinics, and correctional treatment centers, except for low voltage application.

#### ARTICLE 392

##### Cable Trays

**NOTE: Relocating the following OSHPD Amendment from Section 318-4 to Section 392.4 ~~318-4. 392.4~~ Uses Not Permitted.** Cable tray systems shall not be used in hoistways or where subject to severe physical damage. Cable tray systems shall not be used in environmental airspaces, except as permitted in Section 300.22, to support wiring methods recognized for use in such spaces. **[For OSHPD 1, 2, 3, & 4]** Nonmetallic cable trays shall not be used for branch circuits in patient care areas of hospitals, nursing homes, ~~and clinics, and correctional treatment centers.~~

#### ARTICLE 404

##### Switches

**NOTE: Relocating the following OSHPD Amendment from Section 680-62(g)(1) to Section 404.8(A.1) Switches ~~680-62(g)(1)~~ 404.8** Accessibility and Grouping.

**(A) Location.** All switches and circuit breakers used as switches shall be located so that they may be operated from a readily accessible place. They shall be installed so that the center of the grip of the operating handle of the switch or circuit breaker, when in its highest position, is not more than 2.0 m (6 ft 7 in.) above the floor or working platform.

**Exception No. 1:** On bus way installations, fused switches and circuit breakers shall be permitted to be located at the same level as the bus way. Suitable means shall be provided to operate the handle of the device from the floor.

**Exception No. 2:** Switches and circuit breakers installed adjacent to motors, appliances, or other equipment that they supply shall be permitted to be located higher than

specified in the foregoing and to be accessible by portable means.

**Exception No. 3:** Hook stick operable isolating switches shall be permitted at greater heights.

**(A.1) [For OSHPD 1, 2, & 4] Switches shall not be installed within shower rooms or stalls or be accessible from within these areas. Switches shall not be installed within 5 feet (1.52 m) of the perimeter of bathtubs.**

#### **ARTICLE 406**

##### **Receptacles, Cord Connectors, and Attachment Plugs (Caps)**

**NOTE:** Relocating the following OSHPD Amendment from Section 680-62(g)(1) to Section 406.8(C.1) Receptacles ~~680-62(g)(1)~~ **406.8** Receptacles in Damp or Wet Locations.

**(C) Bathtub and Shower Space.** A receptacle shall not be installed within a bathtub or shower space.

**(C.1) [For OSHPD 1, 2, & 4] Receptacles shall not be installed within shower rooms or stalls or be accessible from within these areas. Receptacles shall not be installed within 5 feet (1.52 m) of the perimeter of bathtubs.**

#### **ARTICLE 517**

##### **Health Care Facilities**

##### **~~517-3.~~ 517.2 Definitions.**

**Patient Care Area.** Any portion of a health care facility wherein patients are intended to be examined or treated. Areas of a health care facility in which patient care is administered are classified as general care areas or critical care areas, either of which may be classified as a wet location. The governing body of the facility designates these areas in accordance with the type of patient care anticipated and with the following definitions of the area classification.

##### **~~(b) Critical Care Areas.~~**

**General Care Areas.** Patient bedrooms, examining rooms, treatment rooms, clinics, and similar area in which it is intended that the patient will come in contact with ordinary appliances such as a nurse call system, electrical beds, examining lamps, telephone, and entertainment devices. In such areas, it may also be intended that patients be connected to electro medical devices (such as heating pads, electrocardiographs, drainage pumps, monitors, otoscopes, ophthalmoscopes, intravenous lines, etc.)

**Critical Care Areas.** Those special care units, intensive care units, coronary care units, angiography laboratories, cardiac catheterization laboratories, delivery rooms, operating rooms, **[For OSHPD 1, 2, 3, & 4] post-operative recovery rooms**, and similar areas in which patients are intended to be subjected to invasive procedures and connected to line-operated, electro medical devices.

**Wet Locations.** Those patient care areas that are normally subject to wet conditions while patients are present. These include standing fluids on the floor or drenching of the work area, either of which condition is intimate to the patient or staff. Routine housekeeping procedures and incidental spillage of liquids do not define a wet location.

##### **~~517-4.~~ 517.4 [For OSHPD 1, 2, & 4]**

**Services/Systems and Utilities** Refer to Section 420A.4.0 Chapter 4A, Part 2, California Building Code.

## **II. Wiring and Protection**

### **517.10 Applicability.**

**(A)** Part II shall apply to patient care areas of all health care facilities.

**(B)** Part II shall not apply to the following:

- (1) Business offices, corridors, waiting rooms, and the like in clinics, medical and dental offices, and outpatient facilities.
- (2) Areas of nursing homes and limited care facilities wired in accordance with Chapters 1 through 4 of this Code where these areas are used exclusively as patient sleeping rooms.

##### **~~517-10.1~~ 517.10.1 [For OSHPD 1, 2, 3, & 4]**

**Applicability.** Part ~~B~~ **II** shall apply to hospitals, nursing homes, clinics, and correctional treatment centers.

**Exception:** Part ~~B~~ **II** shall not apply to business offices, corridors, waiting rooms, and the like in clinics and outpatient facilities.

##### **~~517-18.~~ 517.18 General Care Areas.**

##### **~~(a.4)~~ (A.1) [For OSHPD, 1, 2, 3, & 4] Patient Bed**

**Location Branch Circuits.** Each patient bed location where inpatient care is provided shall be supplied by at least two branch circuits, at least one of which originates in a normal panel board or equipment emergency branch panel board, and at least one of which originates

from the critical branch emergency panel board.

**Exception No. 1:** Branch circuits serving only special-purpose outlets or receptacles, such as portable X-ray outlets, shall not be required to be served from the same distribution panel or panels.

**Exception No.2:** Requirements of Section 517.18(A) shall not apply to patient bed locations in clinics, medical and dental offices, and outpatient facilities; psychiatric, substance abuse, and rehabilitation hospitals; sleeping rooms of nursing homes and limited care facilities meeting the requirements of Section 517.10(B)(2) **[For OSHPD 1, 2, 3, & 4] Section 517.10.1 Exception.**

**[For OSHPD 1, 2, 3, & 4] Exception No. 2.1:** Clinics, outpatient facilities, psychiatric, substance abuse, and rehabilitation hospitals, nursing homes, and correctional treatment centers providing only basic services.

**Exception No. 3:** A general care patient bed location served from two separate transfer switches on the emergency system shall not be required to have circuits from the normal system.

**(b) (B) Patient Bed Location Receptacles.** Each patient bed location shall be provided with a minimum of four receptacles. They shall be permitted to be of the single or duplex types or a combination of both. All receptacles, whether four or more, shall be listed "hospital grade" and so identified. Each receptacle shall be grounded by means of an insulated copper conductor sized in accordance with Table 250.122.

**Exception No. 1:** Requirements of Section 517.18(b) shall not apply to psychiatric, substance abuse, and rehabilitation hospitals meeting the requirements of 517.10(B)(2) **[For OSHPD 1, 2, 3, & 4] Section 517.10.1 Exception.**

**Exception No. 2:** Psychiatric security rooms shall not be required to have receptacle outlets installed in the room.

**Exception No. 3:** **[For OSHPD 1, 2, & 3]** Hospital grade receptacles shall not be required in-patient sleeping areas in nursing homes.

**(C) Pediatric Locations.** Receptacles located within the patient care areas of pediatric wards, rooms, or areas shall be listed tamper resistant or shall employ a listed tamper resistant cover.

**(d) (D) [For OSHPD 1, 2, & 4] Nursery receptacles.** One duplex receptacle shall be provided for every two bassinets.

## **517-19. 517.19 Critical Care Areas.**

### **(b) (B) Patient Bed Location Receptacles.**

**(1) Minimum Number and Supply.** Each patient bed location shall be provided with a minimum of six receptacles, at least one of which shall be connected to either of the following:

- (1) The normal system branch circuit required in 517.19(A)
- (2) An emergency system branch circuit supplied by a different transfer switch than the other receptacles at the same location.

**[For OSHPD 1, 2, & 4] Exception No. 1:** Each intensive care newborn nursery bed equivalent and each bed location in intensive care and coronary care units shall be equipped with at least 10 single or 5 duplex receptacles listed "Hospital Grade" and so identified; each receptacle shall be grounded to the reference grounding point by means of an insulated grounding conductor.

### **517-22 517.22 [For OSHPD 1, 2, 3, & 4] Artificial Lighting.**

**(a)** All rooms and passageways shall be provided with artificial illumination.

**(b)** Illumination intensity values in each area shall meet the recommended values in the latest edition of the Illuminating Engineering Society Handbook.

**(c) Lamp Protection.** Lamps in fixtures shall be protected against accidental breakage by means of an enclosing lens or diffuser.

**Exception No. 1:** The fixture may be protected by means of louvers with a maximum cell size of 96 square inches if all part of the fixture are completely recessed above the ceiling or if the fixture is completely recessed in an approved soffit.

**Exception No. 2:** Open bottom luminaires with a maximum opening of 144 square inches if completely recessed above the ceiling or completely recessed in an approved soffit.

**Exception No. 3:** Wall mounted night-lights with louvered covers provided they are completely recessed.

**Exception No. 4:** Wire guards or plastic tube guards in service areas such as electrical rooms, equipment rooms, and janitor closets.

### **(d) Special Locations.**

(1) The general illumination fixtures in nurseries, central sterilizing rooms, treatment rooms, surgical suites, intensive care units, recovery rooms, obstetrical suites, emergency rooms, and laboratories shall be smooth and easily cleanable.

(2) Lighting in intensive care nurseries shall be controlled by a dimmer or other means of multiple switching to provide varied lighting intensities. Lighting shall have the ability to provide 100 foot-candles at each infant bed location when needed.

(3) Individual bed area lighting in intensive care and coronary care units shall be controlled by a dimmer or other means of multiple switching, to provide varied lighting intensities.

~~517-23. [For OSHPD 1, 2, 3, & 4] Receptacles Powered by the Alternate (Emergency) Source and Light Switches Controlling Lighting Powered by the Alternate (Emergency) Source. All receptacles connected to the alternate (emergency) source and all light switches controlling lighting connected to the alternate (emergency) source shall be identified in a conspicuous and permanent manner such as with red colored plates and/or red colored devices.~~

**517-24. 517.24 [For OSHPD 1, 2, 3, & 4] Mobile Medical Facilities.**

(a) **Feeder.** The feeder shall be sized in accordance with the requirements of Article 220.

(b) **Service Receptacle.** The service receptacle shall be listed and rated for its use.

(c) **Disconnect.** A disconnecting means listed and rated for its use shall be located adjacent to and within sight of the service receptacle. It shall be capable of simultaneously disconnecting the ungrounded conductors which supply the service receptacle.

**517-30. 517.30 Essential Electrical Systems for Hospitals.**

(a) **(A) Applicability.** The requirements of Part III, Sections 517.30 through 517.35, shall apply to hospitals [For OSHPD 1 & 4] and correctional treatment centers providing optional services where an essential electrical system is required.

(b) **(B) General.**

(7) [For OSHPD 1, 2, & 4] All automatic transfer switches in general acute care hospitals and correctional treatment centers providing optional services shall have provisions for electrically by-passing and isolating the transfer switch. The by-pass switch shall be capable of bypassing loads to the emergency source or normal

source if the selected by-pass source voltage is available.

~~(4.4) (D.1) [For OSHPD 1, 2, 3, & 4] Capacity of Systems.~~ The essential electrical system shall have adequate capacity to meet the demand for the operation of all functions and equipment to be served by each system and branch.

**(E) Receptacle Identification.** The cover plates for the electrical receptacles [For OSHPD 1 & 4] and light switches or the electrical receptacles [For OSHPD 1 & 4] and light switches themselves supplied from the emergency system shall have a distinctive color or marking so as to be readily identifiable. [NFPA 99, 3.4.2.2.4(b)2]

**517-32. 517.32 Life Safety Branch.** No function other than those listed in 517.32(A) through (G) shall be connected to the life safety branch. The life safety branch of the emergency system shall supply power for the following lighting, receptacles, and equipment.

(c) **(C) Alarm and Alerting Systems.** Alarm and alerting systems including the following:

(1) Fire alarms

(2) Alarms required for systems used for the piping of nonflammable medical gases.

~~(3) [For OSHPD 1] Seismic switch enunciator(s)~~

**(D) Communications Systems.** Hospital communications systems, where used for issuing instructions during emergency conditions.

**(E) Generator Set Location.** Task illumination battery charger for emergency battery-powered lighting unit(s) and selected receptacles at the generator set location.

~~(f) (F) Elevators.~~ Elevator cab lighting, [For OSHPD 1] elevator machine room lighting, control, communications, [For OSHPD 1] seismic switch, and signal systems.

**517-33. 517.33 Critical Branch.**

~~(a) (A) Task Illumination and Selected Receptacles.~~

The critical branch of the emergency system shall supply power for task illumination, fixed equipment, selected receptacles, and special power circuits serving the following areas and functions related to patient care:

....

(8) Task illumination, selected receptacles, and selected power circuits for the following:

- a. General care beds (at least one duplex receptacle per patient bedroom)
- b. Angiographic labs
- c. Cardiac catheterization labs
- d. Coronary care units
- e. Hemodialysis rooms or areas
- f. Emergency room treatment areas (selected)
- g. Human physiology labs
- h. Intensive care units
- i. Postoperative recovery rooms (selected)
- [Subsections j through n for OSHPD 1]*
- j. Lithotripsy treatment rooms*
- k. Laser operating rooms*
- l. Electric clocks as required by Part 2, Title 24, C.C.R.*
- m. Food preparation areas, central supply, and utility rooms*
- n. Electrical and mechanical rooms*

- (9) Additional task illumination, receptacles, and selected power circuits needed for effective hospital operation. Single-phase fractional horsepower motors shall be permitted to be connected to the critical branch. [NFPA 99, 3.4.2.2.2(c)]

- (10) **[For OSHPD 1, 2, 3, & 4]** Sensor-operated fixtures when used to comply with Table 4-2, California Plumbing Code.

**517-34. 517.34 Equipment System Connection to Alternate Power Source.** The equipment system shall be installed and connected to the alternate power source such that the equipment described in 517.34(A) is automatically restored to operation at appropriate time-lag intervals following the energizing of the emergency system. Its arrangement shall also provide for the subsequent connection of equipment described in 517.34(B). [NFPA 99, 3.4.2.2.3(b)]

**Exception:** For essential electrical systems under 150 kVA, deletion of the time-lag intervals feature for delayed automatic connection to the equipment system shall be permitted.

....

**(b) (B) Equipment for Delayed Automatic or Manual Connection.** The following equipment shall be arranged for either delayed automatic or manual connection to the alternate power source:

- (1) Heating equipment to provide heating for operating, delivery, labor, recovery, intensive care, coronary care, nurseries, infection/isolation rooms, emergency treatment spaces, and general patient rooms and pressure maintenance (jockey or make-up) pump(s) for water based fire protection systems.

**Exception:** Heating of general patient rooms and infection/isolation rooms during disruption of the normal source shall not be required under any of the following conditions:

- (a) The outside design temperature is higher than –6.7°C (20°F).
- (b) The outside design temperature is lower than –6.7°C (20°F), and where a selected room(s) is provided for the needs of all confined patients, only such room(s) need be heated.
- (c) The facility is served by a dual source of normal power.

**(1.1) [For OSHPD 1 & 4]** Heating, ventilating, and cooling equipment as required by the California Mechanical Code.

- (2) An elevator(s) selected ...

#### **517-40. 517.40 Essential Electrical Systems for Nursing Homes and Limited Care Facilities.**

**(a.1)(A.1) [For OSHPD 1, 2, & 4] Applicability.** The requirements of Part C, Section 517.40 (c) through 517.44, shall apply to nursing homes, intermediate and skilled nursing facilities, and correctional treatment centers providing only basic services.

#### **517-41. 517.41 Essential Electrical Systems.**

**(E) Receptacle Identification.** The cover plates for the electrical receptacles **[For OSHPD 2 & 4]** and *light switches* or the electrical receptacles **[For OSHPD 2 & 4]** and *light switches* themselves supplied from the emergency system shall have a distinctive color or marking so as to be readily identifiable. [NFPA 99, 3-5.2.2.4]

#### **517-42. 517.42 Automatic Connection to Life Safety Branch.**

The life safety branch shall be installed and connected to the alternate source of power so that all functions specified herein shall be automatically restored to operation within 10 seconds after the interruption of the normal source. No functions other than those listed in 517.42(A) through (G) shall be connected to the life safety branch. The life safety branch shall supply power for the following lighting, receptacles, and equipment.

....

**(e) (C) Alarm and Alerting Systems.** Alarm and alerting systems, including the following:

- (1) Fire alarms
- (2) Alarms required for systems used for the piping of nonflammable medical gases
- (3) **[For OSHPD 1, 2, & 4]** The nurses' call system

**517-43. 517.43 Connection to Critical Branch.** The critical branch shall be installed and connected to the alternate power source so that the equipment listed in 517.43(A) shall be automatically restored to operation at appropriate time-lag intervals following the restoration of the life safety branch to operation. Its arrangement shall also provide for the additional connection of equipment listed in 517.43(B) by either delayed automatic or manual operation.

**Exception:** For essential electrical systems under 150 kVA, deletion of the time-lag intervals feature for delayed automatic connection to the equipment system shall be permitted.

**(a) (A) Delayed Automatic Connection.** The following equipment shall be connected to the critical branch and shall be arranged for delayed automatic connection to the alternate power source:

- (1) Patient care areas ? task illumination and selected receptacles in the following:
  - a. Medication preparation areas
  - b. Pharmacy dispensing areas
  - c. Nurses' stations (unless adequately lighted by corridor luminaries)
- (2) Sump pumps and other equipment required to operate for the safety of major apparatus and associated control systems and alarms
- (3) Smoke control and stair pressurization systems
- (4) Kitchen hood supply and/or exhaust systems, if required to operate during a fire in or under the hood
- (5) Supply, return and exhaust ventilating systems for airborne infectious isolation rooms.
- ~~(5)~~(6) **[For OSHPD 1, 2, & 4]** Selected receptacles in patient room corridors so that any patient bed can be reached with fifty (50) foot extension cord.
- ~~(6)~~(7) **[For OSHPD 1, 2, & 4]** Task lighting and at least one receptacle in electrical and mechanical rooms.
- ~~(7)~~(8) **[For OSHPD 1, 2, 3, & 4]** Sensor-operated fixtures when used to comply with Table 4-2, California Plumbing Code.

**(b) (B) Delayed Automatic or Manual Connection.** The following equipment shall be connected to the critical branch and shall be arranged for either delayed automatic or manual connection to the alternate power source.

- (1) Heating equipment to provide heating for patient rooms.

*Exception: Heating of general patient rooms during disruption of the normal source shall not be required under any of the following conditions:*

- (a) The outside design temperature is higher than  $-6.7^{\circ}\text{C}$  ( $20^{\circ}\text{F}$ ), or
- (b) The outside design temperature is lower than  $-6.7^{\circ}\text{C}$  ( $20^{\circ}\text{F}$ ) and where a selected room(s) is provided for the needs of all confined patients, only such room(s) need be heated.
- (c) The facility is served by a dual source of normal power as described in 517.44(C), FPN.

**(1.1) [For OSHPD 1, 2, & 4]** Heating, ventilating, and cooling equipment as required by California Mechanical Code.

#### **517-44. 517.44 Sources of Power.**

....

**(B) Alternate Source of Power.** The alternate source of power shall be a generator(s) driven by some form of prime mover(s) and located on the premises.

*Exception No. 1: Where the normal source consists of generating units on the premises, the alternate source shall be either another generator set or an external utility service.*

*Exception No. 2: Nursing homes or limited care facilities meeting the requirements of 517.40(A), Exception, shall be permitted to use battery system or self-contained battery integral with the equipment. [NFPA 99, 3.4.1.1.3, 3.5.1, 16.3.3.2.1, 17.3.3.2.1]*

**(b-1) (B.1) [For OSHPD 1, 2, & 4] Alternate Source of Power.** The alternate source of power shall be generator(s) driven by some form of prime mover(s), and located on the premises.

*Exception No. 1: Where the normal source consists of generating units on the premises, the alternate source shall be either another generator set, or an external utility service.*

#### **517-50. 517.45 Essential Electrical Systems for Other**

## Health Care Facilities

**(D) Power Systems.** Battery systems shall be installed in accordance with the requirements of Article 700, and generator systems shall be as described in 517.30 through 517.35.

**(D.1) [For OSHPD 1, 2, 3, & 4] Exception:** Ambulatory surgical clinics shall be provided with a generator with on-site fuel.

### 517.45

**(E) [For OSHPD 3 & 4] Receptacle and Light Switch Identification.** The cover plates for the electrical receptacles and light switches or the electrical receptacles and light switches themselves, supplied from the emergency system, shall have a distinctive color or marking so as to be readily identifiable.

**(d) (F) [For OSHPD 1, 2, 3, & 4] Ambulatory Surgical Clinics.**

(1) Illumination of means of egress, exit lights, alarms and alerting systems, nurses' call system, central suction system.

(2) Task illumination and selected receptacles in:  
**a.** Operating Rooms; **b.** Recovery Rooms; **c.** Nurses' Stations; **d.** Electrical and mechanical equipment rooms; and **e.** Telephone equipment rooms.

**(e) (G) [For OSHPD 1, 2, 3, & 4] Hemodialysis Clinic.**

(1) Illumination for means of egress and exit lights shall be provided, using battery-operated equipment with a capacity to sustain its connected load for a minimum of 1½ hours after loss of the normal source.

**517-423. 517.123 [For OSHPD 1, 2, 3, & 4] Signal Systems.** Signal systems shall include provisions for visual and audible communications between patients and nursing personnel and between health care facility staff.

**Exception No. 1:** In facilities or separate buildings of 6 beds or less, a signal/call system which can be demonstrated to the enforcing agency to function effectively is permitted.

**Exception No. 2:** Acute psychiatric hospitals are not required to install or maintain a signal system if they do not admit or retain patients who are confined to bed.

**(a) Patient/Nurse Call System.** The patient/nurse call system shall be comprised of components which include an enunciator located at each nurses' station which emits an audible signal and indicates the origin of the call. The system shall require resetting at the calling

station unless a two-way voice communication component is included. Visual signals visible from all parts of the corridor shall be provided above corridor doors to each patient bedroom, toilet room, and bath or shower room. The system shall be provided for at least:

(1) One call station at each bed in patient bedrooms, labor rooms, intensive care units and coronary care units, capable of being activated by patients confined to bed.

(2) One call station with cords within 12 inches of the floor in each patient toilet room, bathroom, and shower room in locations easily accessible to patients.

**Exception:** For correctional treatment centers, the call system may be a cordless-type actuator in a location easily accessible to the patient or may be an audio communication system.

(3) Detachable cords at all call stations in rooms designated for psychiatric patient use.

**(b) Staff Emergency Call System.** The staff emergency call system shall be comprised of components which provide for at least:

(1) One call station from each operating, delivery, special procedure, and nursery room connected to the nearest continuously staffed nurses' station or control desk.

(2) One call station from the control desk of each recovery room, intensive care unit, neonatal intensive care unit (NICU), and coronary care unit connected to the nearest continuously staffed nurses' station.

**(c) Emergency Alarm System (Code Blue).** The emergency alarm system shall be comprised of components which provide for at least:

(1) One call station at each bed and nurses' station in recovery room, intensive care unit, and coronary care unit.

(2) One call station at the control desk in each neonatal intensive care unit (NICU).

(3) A unique visual and audible signal at attending nurses' station and above each patient unit or room door.

(4) Visual and audible signals at the PBX operator or other 24-hour staffed area.

## ARTICLE 620

**Elevators, Dumbwaiters, Escalators, Moving Walks, Wheelchair Lifts, and Stairway Chair Lifts**



**620.21 Wiring Methods.** Conductors and optical fibers located in hoist ways, in escalator and moving walk well ways, in wheelchair lifts, stairway chair lift runways, machinery spaces, control spaces, in or on cars, in machine rooms and control rooms, not including the traveling cables connecting the car or counterweight and hoist way wiring, shall be installed in rigid metal conduit, intermediate metal conduit, electrical metallic tubing, rigid nonmetallic conduit, or wire ways, or shall be Type MC, MI, or AC cable unless otherwise permitted in 620.21(A) through (C).

**(A) Elevators.**

**(1) Hoist ways. ....**

**(2) Cars. ....**

**(3) Within Machine Rooms, Control Rooms, and Machinery Spaces and Control Spaces. ....**

**(4) Counterweight.** Flexible metal conduit, liquid tight flexible metal conduit, liquid tight flexible nonmetallic conduit or flexible cords and cables, or conductors grouped together and taped or corded that are part of listed equipment, a driving machine, or a driving machine brake shall be permitted on the counterweight assembly, in lengths not to exceed 1.8 m (6 ft) without being installed in a raceway and where located to be protected from physical damage and are of a flame-retardant type.

**(5) [For OSHPD 1] Seismic Switches.** Cord-and-plug connections for seismic switches shall not be used.

**ARTICLE 680**

**Swimming Pools, Fountains, and Similar Installations**

**680.62 Therapeutic Tubs (Hydrotherapeutic Tanks).**

Therapeutic tubs, used for the submersion and treatment of patients, that are not easily moved from one place to another in normal use or that are fastened or otherwise secured at a specific location, including associated piping systems, shall conform to this part.

**(g) Receptacles.** All receptacles within 5 ft (1.52 m) of a therapeutic tub shall be protected by a ground-fault circuit interrupter.

~~**(1) [For OSHPD 1, 2, & 4] Receptacles and light switches shall not be installed within shower rooms or stalls or be accessible from within these areas. Receptacles and switches shall not be installed within 5 feet (1.52 m) of the perimeter of bathtubs.**~~

**ARTICLE 700**

**Emergency Systems**

**700.12 General Requirements.** Current supply shall be

such that, in the event of failure of the normal supply to, or within, the building or group of buildings concerned, emergency lighting, emergency power, or both shall be available within the time required for the application but not to exceed 10 seconds. The supply system for emergency purposes, in addition to the normal services to the building and meeting the general requirements of this section, shall be one or more of the types of systems described in 700.12(A) through (D). Unit equipment in accordance with 700.12(E) shall satisfy the applicable requirements of this article.

In selecting an emergency source of power, consideration shall be given to the occupancy and the type of service to be rendered, whether of minimum duration, as for evacuation of a theater, or longer duration, as for supplying emergency power and lighting due to an indefinite period of current failure from trouble either inside or outside the building.

Equipment shall be designed and located to minimize the hazards that might cause complete failure due to flooding, fires, icing, and vandalism.

Equipment for sources of power as described in 700.12(A) through (D) where located within assembly occupancies for greater than 1000 persons or in buildings above 23 m (75 ft) in height with any of the following occupancy classes — assembly, educational, residential, detention and correctional, business, and mercantile — shall be installed either in spaces fully protected by approved automatic fire suppression systems (sprinklers, carbon dioxide systems, and so forth), or in spaces with a 1-hour fire rating.

**(A) Storage Battery.** Storage batteries used as a source of power for emergency systems shall be of suitable rating and capacity to supply and maintain the total load for a period of 1 ½ hours minimum, without the voltage applied to the load falling below 87 ½ percent of normal.

Batteries, whether of the acid or alkali type, shall be designed and constructed to meet the requirements of emergency service and shall be compatible with the charger for that particular installation.

For a sealed battery, the container shall not be required to be transparent. However, for the lead acid battery that requires water additions, transparent or translucent jars shall be furnished. Automotive-type batteries shall not be used.

An automatic battery charging means shall be provided.

**(B) Generator Set.**

**(1) Prime Mover-Driven.** For a generator set driven by a prime mover acceptable to the authority having jurisdiction and sized in accordance with 700.5, means shall be provided for automatically starting the prime mover on failure of the normal service and for automatic transfer and operation of all required electrical circuits.

A time-delay feature permitting a 15-minute setting shall be provided to avoid retransfer in case of short-time reestablishment of the normal source.

**(2) Internal Combustion as Prime Movers.** Where internal combustion engines are used as the prime mover, an on-site fuel supply shall be provided with an on-premise fuel supply sufficient for not less than 2 hours' full-demand operation of the system. Where power is needed for the operation of the fuel transfer pumps to deliver fuel to a generator set day tank, this pump shall be connected to the emergency power system.

**[Exceptions for OSHPD 1, 2, 3, & 4]...**

**Exception No. 1:** *The on-premise fuel supply shall be sufficient for not less than 24 hours full-demand operation in acute general care hospitals and correctional treatment centers that provide optional services. For acute care hospital facilities required to meet NPC-5, the on-premise fuel supply shall be sufficient for not less than 72 hours full-demand operations.*

**Exception No. 2:** *The on-premise fuel supply shall be sufficient for not less than 6 hours full-demand operation in the following health facilities of seven or more beds: correctional treatment centers that provide only basic services, acute psychiatric hospitals, intermediate care facilities, and skilled nursing facilities.*

**Exception No. 3:** *The on-premise fuel supply shall be sufficient for not less than 4 hours full-demand operation in ambulatory surgical clinics.*

....

**Notation**

Authority: Health and Safety Code Sections 1226, 1275, 18928, 129790 and 129850 and Government Code Section 11152.5.

Reference(s): Health and Safety Code Sections 18928 and 129850.

## **INITIAL STATEMENT OF REASONS**

### **STATEMENT OF SPECIFIC PURPOSE AND RATIONALE:**

Title 24, Part 3, California Electrical Code

The Office of Statewide Health Planning and Development (OSHPD) is mandated to adopt the most recent edition of model code, as amended by the Office, pursuant to Health and Safety Code Section 18928. This rulemaking represents the Office's proposal to adopt the 2002 National Electrical Code (NEC) published by the National Fire Protection Association, Inc. (NFPA) which will become the base

document for the 2004 California Electrical Code, Title 24, Part 3. This proposal will also carry forward existing California amendments of the 2001 California Electrical Code to be incorporated into the 2004 California Electrical Code, Title 24, Part 3.

### **Purpose**

The purpose of this proposal is to comply with Health and Safety Code provisions that mandate the adoption of the latest edition of the model code and to carry forward existing amendments that apply to hospitals, skilled nursing facilities, licensed clinics and correctional treatment centers. This proposal also makes technical amendments to allow for new provisions in the 2002 NEC and editorial amendments to accommodate for changes in the new format and sectioning of 2002 NEC text. The proposed amendments will provide clarification and consistency within the code

### **Rationale**

#### **Section 352.12(G)**

OSHPD has jurisdiction over hospitals, skilled nursing facilities, clinics and correctional treatment centers and no other health facilities. The amendments to this section repeals "other health facilities" terminology to provide consistency with OSHPD's jurisdictional authority.

#### **Section 392.4**

OSHPD adopts Section 392.4, as it is currently amended, for correctional treatment centers (OSHPD 4), however, this specific health facility is currently not listed within the provision. The amendment will editorially correct the omitted terminology.

#### **Sections 680.62(g) (1), 404.8(A.1) and 406.8(C.1)**

The existing amendment in Section 680.62(g) (1) of the 2001 CEC regarding installation of receptacles and switches in shower rooms or stalls is being carried forward but will no longer be placed in Article 680. The amendment will be repealed from Article 680 and will become two separate amendments. The 2002 NEC relocated requirements regarding installation location of receptacles and switches which can now be found in Article 404-Switches and Article 406-Receptacles. This proposal will split the original amendment (Section 680.62(g)(1)) and relocate the requirements to fit the new model code language. The amendment for switches will be appropriately placed within new Section 404.8 (A.1) and the amendment for receptacles will be placed in new Section 406.8 (C.1).

#### **Section 517.23, 517.30(E), 517.41(E) and 517.45(E)**

The existing amendment, Section 517.23 of the 2001 CEC, regarding identification of receptacles and light

switches that are connected by an alternate (emergency) source is being repealed because the 2002 NEC has new sections which cover receptacle identification requirements. OSHPD is amending two of the new model code sections (Section 517.30(E) and 517.41(E)) to include light switches within each provision. Section 517.30(E) will apply to hospitals and correctional treatment centers and Section 517.41(E) will apply to skilled nursing facilities and correctional treatment centers. This proposal will also add an amendment for the same requirement in Section 517.45(E), which will apply to clinics.

**Section 517.32(c)(3)**

The existing amendment, Section 517.32(c)(3) regarding seismic switch enunciator(s) is being repealed. Alarm and alerting systems are already required to be on the life safety branch pursuant to the model code provisions of Section 517.32(c).

**Section 517.32(f)**

The existing OSHPD amendments in Section 517.32(f) are being repealed. Currently, these amendments require elevator machine room lighting and seismic switch on the life safety branch for hospitals. Elevator machine rooms are considered mechanical rooms and require task lighting on the critical branch for hospitals under existing amended Section 517.33(A)(3)(n). Lighting on the life safety branch is for a means of egress and can only be switched under the provisions of Section 700.20. Seismic switches are part of the control system and are already required to be on the life safety branch pursuant to the model code provisions of Section 517.32(F).

**TECHNICAL, THEORETICAL, AND EMPIRICAL STUDY, REPORT, OR SIMILAR DOCUMENTS:**

There are no documents to be identified regarding this regulatory proposal.

**CONSIDERATION OF REASONABLE ALTERNATIVES**

This triennial adoption of the model code is mandated by statute. There are no alternatives to this proposed regulatory action.

**REASONABLE ALTERNATIVES THE AGENCY HAS IDENTIFIED THAT WOULD LESSEN ANY ADVERSE IMPACT ON SMALL BUSINESS.**

These regulations will not impose an adverse impact on small business.

**FACTS, EVIDENCE, DOCUMENTS, TESTIMONY, OR OTHER EVIDENCE OF NO SIGNIFICANT ADVERSE IMPACT ON BUSINESS.**

This triennial adoption of model code is mandated by statute. There will not be an adverse impact imposed on hospitals, skilled nursing facilities, licensed clinics or correctional treatment centers in California.

**ESTIMATE OF COST OR SAVINGS**

- ◆ Cost or Savings to any state agency: **No**
- ◆ Cost to any local agency required to be reimbursed under Part 7(commencing with Section 17500) of Division 4: **No**
- ◆ Cost to any school district required to be reimbursed under Part 7 (commencing with Section 17500) of Division 4: **No**
- ◆ Other nondiscretionary cost or savings imposed on local agencies: **No**
- ◆ Cost or savings in federal funding to the state: **No**

Estimate: Not applicable.

**INITIAL DETERMINATION OF NO SIGNIFICANT STATEWIDE ADVERSE ECONOMIC IMPACT ON BUSINESSES**

The OSHPD has made a determination that the adoption/amendment/repeal of this regulation will not have a significant statewide adverse economic impact on businesses, including the ability of California businesses to compete with business in other states.

**DECLARATION OF EVIDENCE**

(The declaration the agency shall provide in the record of facts, evidence, documents, testimony, or other evidence that the agency relies upon to support its initial determination of no effect.)

This proposal represents the mandated triennial adoption of model code. This proposed adoption will not have an adverse economic impact on businesses.

**FINDING OF NECESSITY FOR THE PUBLIC'S HEALTH, SAFETY, OR WELFARE**

(Any regulation that requires a report shall not apply to businesses, unless the agency makes a finding that it is necessary for the health, safety, or welfare of the public that the regulations apply to businesses.)  
No report is required by the proposed regulations.

**COST IMPACT ON REPRESENTATIVE PRIVATE PERSON OR BUSINESS**

The OSHPD is not aware of any cost impacts that a representative private person or business would necessarily incur in reasonable compliance with the proposed action.

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(END OF ITEM)

**ASSESSMENT OF EFFECT OF REGULATIONS UPON JOBS AND BUSINESS EXPANSION, ELIMINATION OR CREATION**

The OSHPD has assessed whether or not and to what extent this proposal will affect the following:

- ◆ The creation or elimination of jobs within the State of California.

No affect.

- ◆ The creation of new businesses or the elimination of existing businesses within the State of California.

No affect.

- ◆ The expansion of businesses currently doing business with the State of California.

No affect.

**INITIAL DETERMINATION OF SIGNIFICANT EFFECT ON HOUSING COSTS**

The OSHPD has made a determination that this proposal will not have a significant effect on housing costs.

**STAFF FINDINGS**

CBSC staff could not locate the proposed amendment for Article 517 Health Care Facilities, Section 517.123, Article 620 Elevators, Dumbwaiters, Escalators, Moving Walks, Wheelchair Lifts, and Stairway Chair Lifts, Section 620.21 Wiring Methods. Article 700 Emergency Systems, of the 2002 NEC.

**ITEM 8-1 – Committee Recommendations**

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## EXPRESS TERMS

**Adopt Chapter 1 through Chapter 9 of the 2002 NEC:**  
(NEC standards adopted by the Commission are applicable to all occupancies in California.)

**MATRIX ADOPTION TABLE**

Adopting Agency	BSC	REMARKS
Adopt entire 2002 NEC Chapter 1 through 9 without amendments	<b>X</b>	No new amendments are being proposed by BSC during this 2002 annual adoption cycle.
Adopt Entire 2002 NEC Chapter 1 through 9 as amended <sup>1</sup> 2 <sup>2</sup> 3 (amended articles listed below)		
Adopt Only those articles of the 2002 NEC which are listed below and/or Adopt Only those California promulgated articles <sup>1, 2, 3</sup> listed below		

Authority: Health & Safety Code Sections 18928 and 18934.5

Reference(s): Health & Safety Code Sections 18928, 18928.1 and 18934.5

## INITIAL STATEMENT OF REASONS

### STATEMENT OF SPECIFIC PURPOSE AND RATIONALE:

The California Building Standards Commission (CBSC) currently adopts the 1999 National Electrical Code (NEC) of the National Fire Protection Association (NFPA) un-amended, which serves as the basis for the 2001 California Electrical Code (California Code of Regulations, Title 24, Part 3). The CBSC adopts the NEC for state buildings, building constructed by the University of California, and building constructed by the California State University pursuant to its authority of Health and Safety

1 New Amendments are shown underlined with "CA"

2 Existing amendments of the 2001 California Electrical Code being repealed are shown stricken with "CA"

3 Existing amendments being continued from 2001 CEC into the 2004 CEC are shown italicized with "CA"

Code Section 18934.5.

In late 2001, the NFPA published its 2002 NEC. Health and Safety Code Section 18928 requires the CBSC to propose the most recent edition of this model code for adoption within one year of its publication. The CBSC is proposing to adopt the 2002 NEC un-amended. The purpose and rationale for this proposed regulatory action is to comply with this provision of California law.

### TECHNICAL, THEORETICAL, AND EMPIRICAL STUDY, REPORT, OR SIMILAR DOCUMENTS:

The CBSC is not relying on technical, theoretical and empirical studies, reports or similar documents in proposing this regulatory action. The adoption of the 2002 NEC is mandated pursuant to Health and Safety Code Section 18928.

### CONSIDERATION OF REASONABLE ALTERNATIVES

The CBSC has not identified any reasonable alternatives. The adoption of the 2002 NEC is mandated pursuant to Health and Safety Code Section 18928.

### REASONABLE ALTERNATIVES THE AGENCY HAS IDENTIFIED THAT WOULD LESSEN ANY ADVERSE IMPACT ON SMALL BUSINESS.

The CBSC has not identified any reasonable alternatives nor has any reasonable alternatives been identified or brought to the attention of the CBSC. The adoption of the 2002 NEC is mandated pursuant to Health and Safety Code Section 18928.

### FACTS, EVIDENCE, DOCUMENTS, TESTIMONY, OR OTHER EVIDENCE OF NO SIGNIFICANT ADVERSE IMPACT ON BUSINESS.

The adoption of the 2002 NEC is mandated pursuant to Health and Safety Code Section 18928. The CBSC has not made an initial determination that this action will not have a significant adverse economic impact on business

### ESTIMATE OF COST OR SAVINGS

(An estimate, prepared in accordance with instructions adopted by Department of Finance, of cost or savings to any state agency, local agency, or school district. Provide a copy of the "Economic and Fiscal Impact Statement" (Form 399))

- ♦ Cost or Savings to any state agency: **Undetermined**
- ♦ Cost to any local agency required to be reimbursed under Part 7(commencing with Section 17500) of Division 4: **Undetermined**
- ♦ Cost to any school district required to be reimbursed under Part 7 (commencing with Section 17500) of Division 4: **Undetermined**
- ♦ Other nondiscretionary cost or savings imposed on

local agencies: **Undetermined**

- ◆ Cost or savings in federal funding to the state: **Undetermined**

Estimate: Cost or savings to this proposed regulatory is undetermined as the adoption of the 2002 National Electrical Code is an update to minimum electrical safety standards of 1999 National Electrical Code, which currently serves as the minimum electrical safety standards for the 2001 California Electrical Code. The National Electrical Code provides a variety of optional methodologies for compliance. The method of compliance is the choice of the design professional.

#### **INITIAL DETERMINATION OF SIGNIFICANT STATEWIDE ADVERSE ECONOMIC IMPACT ON BUSINESSES**

- ◆ Identification of the types of businesses that would be affected.  
All occupancies
- ◆ A description of the projected reporting, record keeping, and other compliance requirements that would result from the proposed action.  
None
- ◆ The California Building Standards Commission has made an initial determination that the adoption of this regulation may have a significant adverse economic impact on businesses, including the ability of California businesses to compete in other states. The California Building Standards Commission has not considered proposed alternatives that would lessen any adverse impact on business and invites you to submit proposals. Submissions may include the following considerations:
  - ◆ The establishment of differing compliance or reporting requirements or timetables which take into account the resources available to businesses.
  - ◆ Consolidation or simplification of compliance and reporting requirements for businesses.
  - ◆ The use of performance standards rather than prescriptive standards.
  - ◆ Exemption or partial exemption from the regulatory requirements for businesses.

#### **COST IMPACT ON REPRESENTATIVE PRIVATE PERSON OR BUSINESS**

The California Building Standards Commission is not aware of any cost impacts that a representative private person or business would necessarily incur in reasonable compliance with the proposed action.

#### **ASSESSMENT OF EFFECT OF REGULATIONS UPON JOBS AND BUSINESS EXPANSION, ELIMINATION OR CREATION**

The California Building Standards Commission has assessed whether or not and to what extent this proposal will affect the following:

- ◆ The creation or elimination of jobs within the State of California.

The affect on the creation or elimination of jobs within the State of California is undetermined as the adoption of the 2002 National Electrical Code is an update to minimum electrical safety standards of 1999 National Electrical Code, which currently serves as the minimum electrical safety standards for the 2001 California Electrical Code. The National Electrical Code provides a variety of optional methodologies for compliance. The method of compliance is the choice of the design professional.

- ◆ The creation of new businesses or the elimination of existing businesses within the State of California.

The affect on the creation of new businesses or elimination of existing businesses within the State of California is undetermined as the adoption of the 2002 National Electrical Code is an update to minimum electrical safety standards of 1999 National Electrical Code, which currently serves as the minimum electrical safety standards for the 2001 California Electrical Code. The National Electrical Code provides a variety of optional methodologies for compliance. The method of compliance is the choice of the design professional.

- ◆ The expansion of businesses currently doing business with the State of California.

The affect on the expansion of businesses currently doing business with the State of California is undetermined as the adoption of the 2002 National Electrical Code is an update to minimum electrical safety standards of 1999 National Electrical Code, which currently serves as the minimum electrical safety standards for the 2001 California Electrical Code. The National Electrical Code provides a variety of optional methodologies for compliance. The method of compliance is the choice of the design professional.

#### **INITIAL DETERMINATION OF SIGNIFICANT EFFECT ON HOUSING COSTS**

The California Building Standards Commission has made an initial determination that this proposal would not have a significant effect on housing costs.

**STAFF FINDINGS:**

None

**ITEM 9 – Committee Recommendations**

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## EXPRESS TERMS

### ARTICLE 80 - Administration and Enforcement

The Department is proposing to not adopt Article 80 of the 2002 NEC. The Department is proposing to bring forward from the 2001 CEC an existing California Amendment, Article 89 - Administration, which provides rules for the public and local enforcement agencies in California which is consistent with state law.

### ARTICLE 89 - Administration

The Department is proposing the adoption of only those sections within Article 89 indicated below and on the attached matrix table. The numbers of each section and all references to these numbers within each section, have been reformatted to coincide with the change in the numbering format of the 2002 NEC. Article 89 is an existing California amendment, which provides the purpose, scope, administrative authority, and application.

**~~089-1.~~ 89.1 Title.** *The provisions contained in this Code shall be known as the "California Electrical Code," a portion of the "California Building Standards Code," as defined in the "California Building Standards Law" commencing with Section 18901 of the Health and Safety Code, and may be cited and referred to as the "California Electrical Code." The unqualified words "This Code" as used herein, refer only to the California Electrical Code, and do not include any other portions of the California Building Standards Code. These provisions may also be cited as "C.E.C." or "Part 3" within other parts of the California Building Standards Code (Title 24).*

**~~089-2~~ 89.2 Purpose.** *The purpose of this Code is to provide minimum standards to safeguard life or limb, health, property and public welfare, and to protect against hazards that may arise from the use of electricity by regulating and controlling the design, construction, installation, quality of materials, location and operation of electrical equipment, wiring and systems.*

**~~089-3.~~ 89.3 Scope.** *The provisions of this Code and the building standards contained herein, including those standards adopted by reference without amendments, where specifically adopted by the listed agencies under their cited authority and enforced by the enforcing agency specified in Section ~~089-8~~ 89.7, shall apply to the construction, alteration, moving, demolition, repair*

*and use of all electrical equipment, wiring and systems in or on any building or structure or outdoors on any premise or property; except such electrical equipment, wiring and systems which are expressly exempted by Section ~~089-4~~ 89.4.*

**Exception: [For HCD 1] Additions, Alterations, Repairs and Moved Buildings.** *Notwithstanding other provisions of law, alterations, repairs, replacements, and moved buildings are governed by Health and Safety Code, Division 13, Part 1.5, Sections 17912, 17920.3, 17922 (c), 17922.3, 17958.8 and 17958.9, known as the State Housing Law and are implemented by the California Code of Regulations, Title 25, Chapter 1. Health and Safety Code sections 17958.8 and 17958.9 are repeated here for clarity and reads as follows:*

**(a) ~~Section.~~ 17958.8.** *"Local ordinances or regulations governing alterations and repair of existing buildings shall permit the replacement, retention, and extension of original materials and the use of original methods of construction as long as the hotel, lodging house, motel, apartment house, or dwelling, or portions thereof, or building and structure accessory thereto, complies with the provisions published in the State California Building Standards Code and the other rules and regulations of the department or alternative local standards adopted pursuant to Section ~~17920.7~~ 13143.2 and does not become or continue to be a substandard building."*

**(b) ~~Section.~~ 17958.9.** *"Local ordinances or regulations governing the moving of apartment houses and dwellings shall, after July 1, 1978, permit the retention of existing materials and methods of construction so long as the apartment house or dwelling complies with the building standards for foundation applicable to new construction, and does not become or continue to be a substandard building."*

**~~089-4.~~ 89.4 Exempted from this Code.** *This Code does not cover:*

**(a) (A)** *Installations in ships, watercraft other than floating dwelling units, railway rolling stock, aircraft, automotive vehicles, commercial coaches, manufactured homes, mobile homes, and recreational vehicles.*

**(b) (B)** *Installations underground in mines, mine shafts and tunnels.*

**(c) (C)** *Installations of railways for generation, transformation, transmission, or distribution of power used exclusively for operation of rolling stock or installations used exclusively for signaling and communication purposes.*

**(d) (D)** *Installation of communication equipment under the exclusive control of communication utilities, located*

outdoors or in building spaces used exclusively for such installations.

**(e) (E)** Installations under the exclusive control of electrical utilities for the purpose of communication, or metering; or for the generation, control, transformation, transmission, and distribution of electrical energy located in buildings used exclusively by utilities for such purposes or located outdoors on property owned or leased by the utility or on public highways, streets, roads, etc., or outdoors by established rights on private property.

**Exception to (d) (D) and (e) (E):** In places of employment, the following shall apply: installations of conductors, equipment and associated enclosures subject to the jurisdiction of the California Public Utilities Commission, that are owned, operated and maintained by an electric, communications or electric railway utility, but not including conduit, vaults, and other like enclosures containing conductors and equipment of such a utility when located indoors or on premises not used exclusively for utility purposes, but do not apply to the utility's conductors and equipment therein.

**(f) (F)** Installations on highways or bridges.

#### **089-5. 89.5 Non-Building Standards, Orders and Regulations.**

**(a) (A)** Requirements contained in the National Electrical Code (NEC), or in any other referenced code, document, or standard, which are not building standards as defined in Section ~~48942~~ 18909 of the Health and Safety Code, shall not be construed as a part of the provisions of this Code.

**(b) (B)** For the applicability of regulations, safety and other orders, and standards which relate to the administration, enforcement, maintenance, operation and similar non-building standards, see other titles of the California Code of Regulations.

#### **089-6. 89.6 Order of Precedence and Use.**

**(a) (A)** In the event of any difference between the provisions of this Code and the National Electrical Code (NEC), or between this Code and the provisions of any other referenced code, document or standard, the text of this Code shall govern. Where a specific provision varies from a general provision, the specific provisions shall apply.

**(b) (B)** If a section of this Code makes a cross-reference to another section or table in the National Electrical Code (NEC), such cross-referencing shall be interpreted to mean that which is shown in the NEC unless the referenced section or table has been amended or modified in this Code ~~or~~ for the particular enforcing agency.

**(c) (C)** If a section in the National Electrical Code (NEC) makes a cross-reference to another section or table in the NEC, such cross-referencing shall be interpreted to mean that which is shown in the NEC unless the referenced section or table has been amended or modified in this Code for the particular enforcing agency.

**(d) (D)** When adopted by a State agency, and approved by the Commission, the text of amended provisions contained in this Code shall take precedence over the corresponding provisions of the National Electrical Code (NEC).

**089.6.1 89.6.1 [For HCD 1] Local Variances.** For clarification purposes, the applicable Health & Safety Code Section 17958.5 is repeated here and reads as follows:

**Section 17958.5.** "Except as provided in Section 17922.6, in adopting the ordinances or regulations pursuant to Section 17958, a city or county may make such changes or modifications in the requirements contained in the provisions published in the California Building Standards Code and the other regulations adopted pursuant to Section 17922 as it determines, pursuant to the provisions of Section 17958.7, are reasonably necessary because of local climatic, geological, or topographical conditions."

"For purposes of this subdivision, a city and county may make reasonably necessary modifications to the requirements, adopted pursuant to Section 17922, contained in the provisions of the code and regulations on the basis of local conditions."

**089.6.2 89.6.2 [For HCD 1] Findings, Filing and Rejections of Local Variances.** For clarification purposes, the applicable subsection of Health & Safety Code Section 17958.7 is repeated here and reads as follows:

#### **Section 17958.7**

**(a)** "Except as provided in Section 17922.6, the governing body of a city or county, before making any modifications or changes pursuant to Section 17958.5, shall make an express finding that such modifications or changes are reasonably necessary because of local climatic, geological or topographical conditions. Such a finding shall be available as a public record. A copy of those findings, together with the modification or change expressly marked and identified to which each finding refers, shall be filed with the California Building Standards Commission. No modification or change shall become effective or operative for any purpose until the finding and the modification or change have been filed with the California Building Standards Commission."

(b) "The California Building Standards Commission may reject a modification or change filed by the governing body of a city or county if no finding was submitted."

**~~089-7. 89.7~~ Application.**

**3. (C) HCD 1? Department of Housing and Community Development.**

**3A. (1) HCD 1? Department of Housing and Community Development.**

**Application** - Hotels, motels, lodging houses, apartment houses, dwellings, dormitories, condominiums, shelters for homeless persons, congregate residences, employee housing and factory-built housing, and any other types of dwellings containing sleeping accommodations with common toilet or cooking facilities. Reference ~~089-7.8 89.7.8~~ of this code, Office of the State Fire Marshall, SFM for fire and panic safety application.

**Enforcing Agency**---Local Building Department or the Department of Housing and Community Development.

**Authority Cited?** Health and Safety Code sections 17921, 17922 and 19990.

**Reference?** Health and Safety Code sections 17000 through 17060, 17910 through 17990, and 19960 through 19997.

**3B. (2) HCD 1/AC ? Department of Housing and Community Development, Access Compliance.**

**Application?** Covered Multifamily dwellings units, including but not limited to, lodging houses, dormitories, time-share dwellings, condominiums, shelters for homeless persons, congregate residences, apartment houses, dwellings, employee housing, factory-built housing, and any other types of dwellings containing sleeping accommodations with common toilet or cooking facilities which are not subject to DSA/AC requirements.

**HCD 1/AC ?** (Department of Housing and Community Development, Access Compliance).

**Application?** Whenever the identification "HCD 1/AC" appears in this code, it shall mean the following provision by the California Department of Housing and Community Development requires specific accommodations for persons with physical disabilities, as defined in Chapter 11A, of the California Code of Regulations, Title 24, Part 2, also known as the California Building Code. The application of such provisions shall apply only to Group R Occupancies which are newly constructed covered multifamily dwellings structures (as defined in Chapter 2 11A of the California Building Code), including but not limited to, the following:

1. Apartment Buildings with 3 or more dwelling units.
2. Condominiums with 4 or more dwelling units.
3. Lodging Houses, as defined in Chapter 2 of the California Building Code, when used as a residence with 3 or more guest rooms.
4. Congregate Residences, as defined in Chapter 2 of the California Building Code.
5. Dwellings with 3 or more efficiency units, as defined in Chapter 2 of the California Building Code or Section 17958.1 of the California Health and Safety Code.
6. Shelters for the homeless, not otherwise subject to the disabled access provisions of the Division of the State Architect, Access Compliance (DSA/AC).
7. Dormitories, as defined in Chapter 2 of the California Building Code, with 3 or more guest rooms as defined in Chapter 2 of the California Building Code.
8. Time-share dwellings with 3 or more units, except for condominiums covered in item 2 above.
9. Other Group R Occupancies in covered multifamily dwellings which are regulated by the Office of the State Fire Marshal.

Buildings or portions of buildings of the same or similar occupancies, or mixed occupancies, and buildings accessory thereto, may also be subject to the disabled access provisions adopted by DSA/AC. Buildings subject to the disabled access regulations of the DSA/AC are identified in section ~~089-7.5 89.7.5~~ of this Code.

These multifamily structure disabled access regulations do not apply to the alteration, repair, rehabilitation, or additions to existing Group R Occupancies that were constructed and occupied prior to July 15, 1992. These regulations also generally do not cover public accommodations such as hotels and motels. (See Section 89.7.5 for public accommodations).

**Note:** For specific requirements and ~~Exceptions~~, see Chapters 10, ~~and 11A, and 30, as amended, of the California Building Code; Articles Sections 210-7 (g) (g.1), 324.4 Exceptions 1-6 and 380-8 (c) (c.1), 404.8(C), and 406.3(G) as amended, of this part, and Part 5, Chapter 15, as amended, California Plumbing Code, Title 24, California Code of Regulations. (This regulation is effective on an emergency basis July 15, 1992).~~

**Enforcing Agency**---Local Building Department or the Department of Housing and Community Development.

**Authority Cited?** Health and Safety Code sections 17921, 17922, 19990 and Government Code Section 12955.1.

**Reference?** Health and Safety Code sections 17000 through 17060, 17910 through 17990, 19960 through 19997 and Government Code Section 12955.1.

### **3-1 (3) General ? State Housing Law; City or County Enforcement.**

Notwithstanding other provisions of law, Health and Safety Code, Division 13, Parts 1.5, Section 17960 is repeated here for clarity and specificity and reads as follows:

**Section 17960.** “The building department of every city or county shall enforce within its jurisdiction all the provisions published in the State Building Standards Code, the provisions of this part, and the other rules and regulations promulgated pursuant to the provisions of this part pertaining to the erection, construction, reconstruction, movement, enlargement, conversion, alteration, repair, removal, demolition, or arrangement of apartment houses, hotels, or dwellings.”

### **3-2 (4) Right of Entry For Enforcement.**

Notwithstanding other provisions of law, Health and Safety Code Sections 17050(i), 17970, 17971, 17972 are repeated here for clarity and read as follows:

**(a) Section 17050 (i).** “The enforcement agency may:

- (1). Enter public or private properties to determine whether there exists any employee housing to which this part applies.
- (2). Enter and inspect all employee housing wheresoever situated, and inspect all accommodations, equipment, or paraphernalia connected therewith.
- (3). Enter and inspect the land adjacent to the employee housing to determine whether the sanitary and other requirements of this part, the building standards published in the California Building Standards Code relating to employee housing, and the other rules and regulations adopted pursuant to this part have been or are being complied with.”

**(b) Section 17970.** “Any officer, employee, or agent of an enforcement agency may enter and inspect any building or premises whenever necessary to secure compliance with, or prevent a violation of, any provision of this part, the building standards published in the State Building Standards Code, and other rules and regulations promulgated pursuant to the provisions of this part which the enforcement agency has the power to enforce.”

**(c) Section 17971.** “The owner, or authorized agent of any owner, of any building or premises may enter the building or premises whenever necessary to carry out any instructions, or perform any work required to be done pursuant to this part, the building standards published in the State Building Standards Code, and other rules and

regulations promulgated pursuant to the provisions of this part.”

**(d) Section 17972.** “No person authorized by this article to enter buildings shall enter any dwelling between the hours of 6 o'clock p.m. of any day and 8 o'clock a.m. of the succeeding day, without the consent of the owner or of the occupants of the dwelling, nor enter any dwelling in the absence of the occupants without a proper written order executed and issued by a court having jurisdiction to issue the order.”

### **3-3 (5) Unsafe Buildings or Structures.**

#### **3.3.1 (a) Authority to Enforce.**

Notwithstanding other provisions of law, for administration, enforcement, actions, proceedings, abatement, violations and penalties in structures subject to State Housing Law, refer to California Health and Safety Code, Division 13, Part 1.5, Sections 17910 through 17995.5 and California Code of Regulations, Title 25, Division 1, Chapter 1.

#### **3.3.2 (b) Employee housing.**

Notwithstanding other provisions of law, for administration, enforcement, actions, proceedings, violations and penalties applicable to structures subject to the Employee Housing Act, refer to Health and Safety Code, Division 13, Part 1, Sections 17000 through 17062.5 and California Code of Regulations, Title 25, Division 1, Chapter 1.

### **3-4 (6) Violations.**

#### **3.4.1 (a) Actions and Proceedings.**

Notwithstanding other provisions of law, Health and Safety Code, Division 13, Part 1.5, Sections 17980 through 17995.5 address punishments, penalties and fines for violations of building standards in structures subject to State Housing Law and California Code of Regulations, Title 25, Division 1, Chapter 1.

#### **3.4.2 (b) Actions and Proceedings. (For Employee Housing).**

Notwithstanding other provisions of law, and Health and Safety Code, Division 13, Part 1, Sections 17055 through 17062.5 address punishments, penalties and fines for violations of building standards in structures subject to the Employee Housing Act and California Code of Regulations, Title 25, Division 1, Chapter 1.

### **3-5 (7) Methods for Approval of Alternates.**

#### **3.5.1 (a) Alternate for Materials, Designs, Tests and Methods of Construction.**

Notwithstanding other provisions of law, the method for approval of alternate materials, design, tests and methods of construction are set forth in State Housing Law, Health and Safety Code, Division 13, Part 1.5, Section 17923 or 17951(d), 17958 and California Code

of Regulations, Title 25, Division 1, Chapter 1.

**3.5.2 (b) Alternate for Materials, Designs, Tests and Methods of Construction. (For Employee Housing)**

Notwithstanding other provisions of law, the method for approval of alternate materials, appliances, installation, device, arrangement, or method of construction are set forth in the Employee Housing Act, Health and Safety Code, Division 13, Part 1, Section 17002 and California Code of Regulations, Title 25, Division 1, Chapter 1.

**3.6 (8) Fees and Plan Review.**

**3.6.1 (a) General.**

Notwithstanding other provisions of law, reference State Housing Law, Health and Safety Code, Division 13, Part 1.5, Section 17951 and California Code of Regulations, Title 25, Division 1, Chapter 1 for local enforcement agency's authority to prescribe fees.

**3.6.2 (b) Plan Review and Time Limitations.**

Notwithstanding other provisions of law, provisions related to plan checking, prohibition of excessive delays and contracting with or employment of private parties to perform plan checking are set forth in State Housing Law, Health and Safety Code, Division 13, Part 1.5, Section 17960.1, for employee housing State Housing Law, Health and Safety Code, Division 13, Part 1, Sections 17021 and 17055

**3.6.3 (c) Retention of Plans.**

**Note:** Reference ~~Building Standards Law~~, Health and Safety Code, Division 13, Part 3, Sections 19850 and 19851 for provisions related to permanent retention of plans.

**Enforcing Agency---**Local Building Department or the Department of Housing and Community Development.

**Authority Cited?** Health and Safety Code sections 17921 and 50558.

**Reference?** Health and Safety Code sections 17000 through 17060, 17910 through 17990, 19960 through 19997, 50558 and 50559.

**4. (D) HCD-2—Department of Housing and Community Development**

**Application---** Permanent buildings and permanent accessory buildings or structures constructed within in mobile home parks, recreational vehicle parks, temporary recreational parks, travel trailer parks, campgrounds and special occupancy parks which are under the control and ownership of the park operator.

**4.4 (1) Right of Entry For Enforcement. [For HCD 2].**

Notwithstanding other provisions of law, Health and Safety Code, Division 13, Part 2.1, Section 18400 is repeated below for clarity.

**Section 18400**

"(a) The department shall enforce this part and the rules and regulations adopted pursuant to this part, except as provided in Section 18300.

(b) The officers or agents of the enforcement agency may do either of the following:

(1) Enter public or private property to determine whether there exists any park to which this part applies.

(2) Enter and inspect all parks, wherever situated, and inspect all accommodations, equipment, or paraphernalia used in connection therewith, including the right to examine any registers of occupants maintained therein in order to secure the enforcement of this part and the regulations adopted pursuant to this part."

**4.2 (2) Actions and Proceedings. [For HCD 2].**

Notwithstanding other provisions of law, Health and Safety Code, Division 13, Part 2.1, Sections 18402, 18404, 18423, 18510 and 18700 address punishments, penalties and fines for violations of building standards subject to the Mobilehome Parks Act.

**4.3 (3) Alternate for Materials, Designs, Tests and Methods of Construction. [For HCD 2].**

Notwithstanding other provisions of law, the method for approval of alternate materials, appliances, installation, device, arrangement, or method of construction are set forth in the Mobilehome Parks Act, Health and Safety Code, Division 13, Part 2.1, Section 18305.

**Enforcing Agency---**Local building department or the Department of Housing and Community Development.

**Authority Cited---**Health and Safety Code Section 18300, 18610 and 18670

**Reference Cited---**Health and Safety Code Section 18200 through 18851

**089-8. 89.8 Adopting Agency.** An "Adopting agency" is a State agency, excluding an agency in the judicial or legislative department of the State Government, which is responsible for the administration of a program and which as promulgated, adopted and submitted to the Commission for its approval proposed building standards for such programs. "Adopting agency" may include boards, commissions, committees, departments, divisions, officers, and other subdivisions of State Government.

**89-9. 89.9. Format.** The California Electrical Code, a part of the California Building Standards Code, adopts the National Electrical Code (NEC) by reference on an article-by-article basis. Amendments or additions to the provisions of the NEC by each adopting agency are adopted on a section by section or subsection by subsection basis, and follow the NEC format using the same titles, bold face headings and general text arrangement, except where the commission has approved a format variance.

**89-10. ~~89.10.~~ Validity.** If any chapter, article, section, subsection, paragraph, sentence, clause, or phrase of this Code is for any reason held to be unconstitutional, contrary to statute, exceeding the authority of the State as stipulated by statutes, or otherwise inoperative, such decisions shall not affect the validity of the remaining portions of this Code.

**89-11. ~~89.11.~~ Standard Reference Documents.**

~~(a)~~ **(A)** The codes, publications, and standards adopted in the Matrix Adoption or referred to in this Code, including other codes, publications, and standards referred to therein, are by title and date of publication, hereby adopted as standard reference documents of this code.

~~(b)~~ **(B)** Such reference to other documents shall be made in the form of either an Internal citation within the text or a fine print note (utilizing a smaller typographical alphabet letter size), and shall be a specific edition of the referenced document. Internal citations appearing within the text of a building standard are enforceable, and each citation must be checked for accuracy and application. Fine print notes which appear beneath the applicable text of the building standard or Code section are explanatory of permissive and are not enforceable.

**ARTICLE 90 – Introduction**

The Department is proposing the adoption of Article 90 without amendment.

**CHAPTER 1: General, Articles 100-110**

The Department is proposing the adoption of Articles 100 and 110 of Chapter 1 without amendments.

**CHAPTER 2: Wiring and Protection, Articles 200-285**

The Department is proposing the adoption of Articles 200, 210, 215, 220, 225, 230, 240, 250, 280, and 285 of Chapter 2 without amendments.

**ARTICLE 210 Branch Circuits**

**Note:** In the 2002 Edition of the NEC, Section 210-7 was revised and relocated to Section 406.3. California Amendment Section 210-7(g) has been renumbered and relocated with modifications to Section 406.3(G)(1).

~~210-7(g)~~ **[HCD 1/AC w/exceptions] – Installation Heights.**

~~Where access for people with physical disabilities is required by Article 089-7, the center of receptacle outlets on branch circuits of 30 amperes or less shall be installed not more than 48 inches nor less than 15 inches (381 mm) above the floor or working platform.~~

~~**Exception No. 1:** Receptacle outlets installed as part of permanently installed baseboard heaters are exempt.~~

~~**Exception No. 2:** Required receptacle outlets shall be permitted in floors when adjacent to sliding panels or walls.~~

~~**Exception No. 3:** Baseboard electrical outlets used in relocatable partitions, window walls or other electrical convenience floor outlets are not subject to the minimum height requirements.~~

~~**Exception No. 4:** This section shall not apply to existing buildings when the enforcing agency determines that compliance with these standards would create an unreasonable hardship.~~

**Note:** In the 2002 Edition of the NEC, Section 210-7 was revised and relocated to Section 406.3. California Amendment Section 210-7(g.1) has been renumbered and relocated with modifications to Section 406.3(G)(2).

~~210-7(g.1)~~ **[HCD 1/AC]**

~~When access for persons with physical disabilities is required in covered multifamily dwelling units, the center of receptacle outlets on branch circuit of 30 amperes or less shall be located no higher than 48 inches, and no lower than 15 inches, above the floor. If the reach is over an obstruction (for example, a kitchen base cabinet) between 20 and 25 inches in depth, the maximum height is reduced to 44 inches for forward approach, or 46 inches for side approach, provided the obstruction is no more than 24 inches in depth. Obstructions shall not extend more than 25 inches from the wall beneath the receptacle.~~

~~Outlets that do not satisfy these specifications are acceptable provided that comparable outlets, that perform the same functions, are provided within the same area and are accessible.~~

**CHAPTER 3: Wiring Methods and Materials, Articles 300-398**

The Department is proposing the adoption of Articles 300, 310, 312, 314, 320, 322, 324, 328, 330, 332, 336, 338, 340, 342, 344, 348, 350, 352, 354, 356, 358, 360, 362, 366, 368, 370, 372, 374, 376, 378, 380, 382, 384, 386, 388, 390, 392, 396, and 398 of Chapter 3 without

amendments.

The Department is proposing the adoption of Articles 334 and 395, of Chapter 3 with amendments.

The Department is proposing to continue the non-adoption of Integrated Gas Spacer Cable, Article 326 of the 2002 NEC.

**Note: In the 2002 Edition of the NEC, Article 324 has been revised and relocated to Article 394. California Amendment Section 324-4 has been relocated with modifications to Section 394.12.**

**324-4. [HCD 1] - Uses not Permitted.**

~~Concealed [HCD 1] knob-and-tube wiring shall not be used in commercial garages, theaters and similar locations, motion picture studios, hazardous (classified) locations or in the hollow spaces of walls, ceilings and attics when such spaces are insulated by loose, rolled, or foamed-in-place insulating material that envelopes the conductors.~~

~~**EXCEPTION:** This article is not intended to prohibit the installation of insulation where knob-and-tube wiring is present, provided the following are complied with:~~

~~The wiring shall be surveyed by an electrical contractor licensed by the State of California. Certification shall be provided by the electrical contractor that the existing wiring is in good condition with no evidence of deterioration or improper over-current protection, and has no improper connections or splices. Repairs, alterations or extensions to the electrical system will require permits and inspections by the authority having jurisdiction for the enforcement of this code. The certification form shall be filed with the authority having jurisdiction for the enforcement of this code and a copy furnished to the property owner.~~

~~(1) All accessible areas in the building where insulation has been installed around knob-and-tube wiring shall be posted by the insulation contractor with a notice, clearly visible, stating that caution is required when entering these areas. The notice shall be printed in both English and Spanish.~~

~~(2) The insulation shall be noncombustible as defined by Section 215.2N of Part 2 of this Title.~~

~~(3) The insulation shall not have any electrical conductive material as part of or supporting the insulation material.~~

~~(4) Nothing in this exception will prohibit the authority having jurisdiction for the enforcement of this code from requiring permits and inspections for the installation of thermal insulation.~~

**ARTICLE 334. Nonmetallic-Sheathed Cable: Types NM, NMC, and NMS**

**334.10 Uses Permitted.** Type NM, Type NMC, and Type NMS cables shall be permitted to be used in the following:

- (1) One- and two-family dwellings.
- (2) Multifamily dwellings permitted to be of Types III, IV, and V construction except as prohibited in 334.12.
- (3) Other structures permitted to be of Types III, IV, and V construction except as prohibited in 334.12. Cables shall be concealed within walls, floors, or ceilings that provide a thermal barrier of material that has at least a 15-minute finish rating as identified in listings of fire-rated assemblies.

**Note: [HCD 1 and HCD 2] Types III, IV, and V construction as referenced in Section 334.10 items (2) and (3) shall be as defined in Title 24, Part 2, California Building Code.**

FPN No. 1: Building constructions are defined in NFPA 220-1999, Standard on Types of Building Construction, or the applicable building code, or both.

FPN No. 2: See Annex E for determination of building types [NFPA 220, Table 3-1].

(4) Cable trays, where the cables are identified for the use.

FPN: See 310.10 for temperature limitation of conductors.

**(A) Type NM.** Type NM cable shall be permitted as follows:

- (1) For both exposed and concealed work in normally dry locations except as prohibited in 334.10(3).
- (2) To be installed or fished in air voids in masonry block or tile walls

**(B) Type NMC.** Type NMC cable shall be permitted as follows:

- (1) For both exposed and concealed work in dry, moist, damp, or corrosive locations, except as prohibited in 334.10(3)
- (2) In outside and inside walls of masonry block or tile
- (3) In a shallow chase in masonry, concrete, or adobe protected against nails or screws by a steel plate at least 1.59 mm (1/16 in.) thick and covered with plaster, adobe, or similar finish

**(C) Type NMS.** Type NMS cable shall be permitted as follows:

(1) For both exposed and concealed work in normally dry locations except as prohibited in 334.10(3)

(2) To be installed or fished in air voids in masonry block or tile walls

(3) To be used as permitted in Article 780

**Note:** In the 2002 Edition of the NEC, Article 380 was revised and relocated to Article 404. California Amendment Section 380-8(C) has been renumbered and relocated with modifications to Section 404.8(C)(1).

### **380-8 (c) — [HCD 1/AC] — Installation**

~~Where access for people with disabilities is required by Article 089-7, the center of the grip of the operating handle of controls or switches intended to be used by the occupant of the room or area to control lighting and receptacle outlets, appliances or cooling, heating and ventilating equipment, shall be not more than 48 inches (1219 mm) above the floor or working platform.~~

**Note:** Section 380-8(c.1) has been renumbered and relocated with modifications to Section 404.8(C)(2).

### **380-8(c.1) — [HCD 1/AC]**

~~When access for people with physical disabilities is required in covered multifamily dwelling units, light switches, thermostats and other environmental controls shall be located no higher than 48 inches (1219 mm), and no lower than 15 inches (381 mm), above the floor. If the reach is over an obstruction (for example, a kitchen base cabinet) between 20 and 25 inches (508 and 635 mm) in depth, the maximum height is reduced to 44 inches (1118 mm) for forward approach, or 46 inches (1168 mm) for side approach, provided the obstruction is no more than 24 inches (610 mm) in depth. Obstructions shall not extend more than 25 inches (635 mm) from the wall beneath a control. Controls that do not satisfy these specifications are acceptable provided that comparable controls or outlets, that perform the same functions, are provided within the same area and are accessible.~~

## **ARTICLE 394 Concealed Knob-and-Tube Wiring**

**394.12 Uses Not Permitted.** Concealed knob-and-tube wiring shall not be used in the following:

(1) Commercial garages

(2) Theaters and similar locations

(3) Motion picture studios

(4) Hazardous (classified) locations

(5) Hollow spaces of walls, ceilings, and attics where such spaces are insulated by loose, rolled, or foamed-in-place insulating material that envelopes the conductors.

**EXCEPTION: [For HCD 1]** This article is not intended to prohibit the installation of insulation where knob-and-tube wiring is present, provided the following are complied with:

(1) The wiring shall be surveyed by an electrical contractor licensed by the State of California. Certification shall be provided by the electrical contractor that the existing wiring is in good condition with no evidence of deterioration or improper over-current protection, and no improper connections or splices. Repairs, alterations, or extensions to the electrical system will require permits and inspections by the authority having jurisdiction for the enforcement of this code.

(2) The certification form shall be filed with the authority having jurisdiction for the enforcement of this code, and a copy furnished to the property owner.

(3) All accessible areas in the building where insulation has been installed around knob-and-tube wiring shall be posted by the insulation contractor with a notice, clearly visible, stating that caution is required when entering these areas. The notice shall be printed in both English and Spanish.

(4) The insulation shall be noncombustible as defined by Section 215.2N of Part 2 of this Title, in Title 24, Part 2, California Building Code.

(5) The insulation shall not have any electrical conductive material as part of or supporting the insulation material.

(6) Nothing in this exception will prohibit the authority having jurisdiction for the enforcement of this code from requiring permits and inspections for the installations of thermal insulation.

## **CHAPTER 4: Equipment for General Use, Articles 400-490.**

The Department is proposing the adoption of Articles 400, 402, 408, 410, 411, 422, 424, 426, 427, 430, 440, 445, 450, 455, 460, 470, 480, and 490 of Chapter 4 without amendments.

The Department is proposing the adoption of Articles



404 and 406, of Chapter 4 with amendments.

#### ARTICLE 404 Switches

##### ~~380-8(c) and 380-8(c.1)~~ 404.8(C) [HCD 1/AC] – Installation Height

###### (C) [For HCD 1/AC] Installation Height.

(1) [For HCD 1/AC] Where access for people with physical disabilities is required by Article ~~89-7~~ 89.7, the center of the grip of the operating handle of controls or switches intended to be used by the occupant of the room or area to control lighting and receptacle outlets, appliances or cooling, heating and ventilating equipment, shall be not more than 48 inches (1219 mm) above the finished floor or working platform.

(2) [For HCD 1/AC] When access for people with physical disabilities is required in covered multifamily dwellings, ~~units,~~ light switches, thermostats and other environmental controls shall be located no higher than 48 inches (1219 mm), and no lower than 15 inches (381 mm), above the finished floor measured to the center of the grip. If the reach is over an obstruction (for example, a kitchen base cabinet) between 20 and 25 inches (508 and 635 mm) in depth, the maximum height is reduced to 44 inches (1118 mm) for forward approach, or 46 inches (1168 mm) for side approach, provided the obstruction is no more than 24 inches (610 mm) in depth. Obstructions shall not extend more than 25 inches (635 mm) from the wall beneath a control. Controls that do not satisfy these specifications are acceptable provided that comparable controls or outlets, that perform the same functions, are provided within the same area and are accessible.

#### ARTICLE 406 Receptacles, Chord Connectors, and Attachment Plugs (Caps)

**406.3 General Installation Requirements.** Receptacle outlets shall be located in branch circuits in accordance with Part III of Article 210. General installation requirements shall be in accordance with 406.3(A) through (F). [For HCD 1/AC] General installation requirements shall be in accordance with 406.3(A) through (G).

##### ~~210-7(g) and 210-7(g.1)~~ 406.3(G) [HCD 1/AC] – Installation Heights.

###### 406.3(G) [HCD 1/AC] – Installation Heights.

(1) [HCD 1/AC w/exceptions 1, 2, and 3] Where access for people with physical disabilities is required by Article ~~89-7~~ 89.7, ~~the center of~~ receptacle outlets on branch circuits of 30 amperes or less shall be installed in an outlet box located not more than 48 inches (1219 mm) measured from the top of the receptacle outlet box nor less than 15 inches (381 mm) measured from the bottom of the receptacle outlet box above the finished floor or

working platform.

**Exception No. 1:** Receptacle outlets installed as part of permanently installed baseboard heaters are exempt.

**Exception No. 2:** Required receptacle outlets shall be permitted in floors when adjacent to sliding panels or walls.

**Exception No. 3:** Baseboard electrical outlets used in relocatable partitions, window walls or other electrical convenience floor outlets are not subject to the minimum height requirements.

**Exception No. 4:** This section shall not apply to existing buildings when the enforcing agency determines that compliance with these standards would create an unreasonable hardship.

(2) [For HCD 1/AC] When access for persons with physical disabilities is required in covered multifamily dwellings, ~~units,~~ ~~the center of~~ receptacle outlets on branch circuits of 30 amperes or less shall be located in an outlet box located no more than 48 inches (1219 mm) measured from the top of the receptacle outlet box nor less than 15 inches (381 mm) measured from the bottom of the receptacle outlet box above the finished floor or working platform. If the reach is over an obstruction (for example, a kitchen base cabinet) between 20 and 25 inches in depth, the maximum height measured at the box is reduced to 44 inches for forward approach, or 46 inches for side approach, provided the obstruction is no more than 24 inches in depth. Obstructions shall not extend more than 25 inches from the wall beneath the receptacle.

Outlets that do not satisfy these specifications are acceptable provided that comparable outlets, that perform the same functions, are provided within the same area and are accessible.

#### CHAPTER 5: Special Occupancies, Articles 500-555.

The Department is proposing the adoption of Articles 518, 527, and 545, of Chapter 5 without amendments.

The Department is proposing to not adopt Articles 500, 501, 502, 503, 504, 505, 510, 511, 513, 514, 515, 516, 517, 520, 525, 530, 540, 547, 550, 551, 552, 553, and 555 of the 2002 NEC.

#### CHAPTER 6: Special Equipment, Articles 600-695.

The Department is proposing the adoption of Articles 600, 620, 680, 690, and 692 of Chapter 6 without amendments.

The Department is proposing to not adopt Articles 604, 605, 610, 630, 640, 645, 647, 650, 660, 665, 668, 669, 670, 675, 685, and 695 of the 2002 NEC.

The Department is proposing the adoption of Article 625 as amended by the State Fire Marshal.

## **CHAPTER 7: Special Conditions, Articles 700-780.**

The Department is proposing the adoption of Articles 700, 702, 705, 720, 725, 727, and 770 of Chapter 7 without amendments.

The Department is proposing to not adopt Articles 701, 760, and 780.

## **CHAPTER 8: Communications Systems, Articles 800-830.**

The Department is proposing to not adopt Chapter 8.

## **CHAPTER 9: Tables**

The Department is proposing the adoption of the Tables 1, 4, 5, 5A, 8, and 9, 11(A), 11(B), 12(A), and 11(B) in Chapter 9 without amendments.

## **ANNEXES**

The Department is proposing to not adopt Annexes A, B, C, D, E, and F.

## **INITIAL STATEMENT OF REASONS**

The Administrative Procedure Act requires that an Initial Statement of Reasons be available to the public upon request when rulemaking action is being undertaken. The following are the reasons for proposing this particular rulemaking action.

### **1) Administrative Requirement.**

Health and Safety Code Section 17922 directs the Department of Housing and Community Development (the Department) to recommend adoption of the most recent edition of the NEC into Part 3, of Title 24, of the California Code of Regulations.

### **2) Specific Purpose**

The California Building Standards Commission (CBSC) selected the 2002 NEC published by the National Fire Protection Association as the model code to be referenced in Title 24, Part 3 for the 2004 code adoption cycle.

**The specific purpose** of these regulations is to adopt by reference the 2002 edition of the NEC, with State amendments, as indicated on the attached Adoption Matrix, into Part 3, Title 24, CCR for the following programs:

**a) State Housing Law:** relative to residential occupancies, buildings or structures accessory thereto

and as provided for through the Federal Fair Housing Amendment Act's accessibility requirements, except where the application is for public use only.

**b) Employee Housing Act:** relative to the use of electrical equipment and systems in or on any building or structure or outdoors on premises or property in accordance with Health and Safety Code Section 17040.

**c) Mobilehome Park or Special Occupancy Park:** relative to the use of electrical equipment and systems in or on any permanent buildings, accessory building, and structures under the ownership and control of the park operator within the part in accordance with Health and Safety Code Sections 18300, 18630, and 18670.

**d) Factory-Built Housing Law:** relative to residential buildings, dwellings or portions thereof, or building component, or manufactured assembly in accordance with Health and Safety Code Section 19990.

### **3) Rationale for Necessity.**

The National Fire Protection Association made the 2002 NEC available on July 13, 2001, with an effective date of August 2, 2001. CBSC has established a publication date of August 2001 and the NEC will automatically become adopted, in its entirety, pursuant to Health and Safety Code Section 17922 (b), on August 1, 2002 (one year from its date of publication), if not adopted or proposed for adoption by the CBSC.

If the 2002 NEC becomes adopted in its entirety without being adopted by the CBSC, such automatic adoption would cause considerable confusion because California amendments, also known as "State amendments," are necessary modifications to the model code language ensure that the 2004 CEC is consistent with state and federal law.

**It is necessary to propose the adoption** of some sections of the 2002 NEC with amendments to the model code language to incorporate state and federal law provisions.

**It is necessary not to propose the adoption** of some sections of the 2002 NEC as they would conflict with existing state and federal law.

**It is necessary to propose to bring forward** previously existing State amendments. Some existing amendments will be brought over without any changes and will represent no change in their effect from the 2001 California Electrical Code. Other previously existing State amendments will be amended as follows:

- Renummer sections in order to fit appropriately into the newly adopted text of the 2002 edition of the NEC

- Add or change the reference to the application authority [HCD1, HCD 1/AC, and/or HCD 2].
- Amend language for consistency with of existing state and federal law.
- Amendment language indicating that specified model code language of the 2002 edition of the NEC is not adopted into the 2004 CEC.

#### 4) Proposed Regulatory Actions.

**ADMINISTRATION AND ENFORCEMENT, Article 80.** This new article in the model code provides a standardized set of administrative rules that can be used by the adopting jurisdictions.

##### Specific Regulatory Action

The Department is proposing to not adopt Article 80 of the 2002 NEC. The Department is proposing to bring forward from the 2001 CEC an existing California Amendment, Article 89 - Administration, which provides rules for the public and local enforcement agencies in California which is consistent with state law.

#### Article 89 - Administration

**Section 89.1** Title  
**Section 89.2** Purpose  
**Section 89.3** Scope  
**Section 89.4** Exempted from this Code  
**Section 89.5** Non-Building Standards, Orders and Regulations  
**Section 89.6** Order of Precedence and Use  
**Section 89.6.1** Local Variances  
**Section 89.6.2** Findings, Filing, and Rejections of Local Variances  
**Section 89.7** Application  
**Section 89.7(C)** HCD-Department of Housing and Community Development  
**Section 89.7(C)(1)** HCD-1-Department of Housing and Community Development  
**Section 89.7(C)(2)** HCD-1/AC-Department of Housing and Community Development  
**Section 89.7(C)(3)** General – State Housing Law; City or County Enforcement  
**Section 89.7(C)(4)** Right of Entry For Enforcement  
**Section 89.7(C)(5)** Unsafe Buildings or Structures  
**Section 89.7(C)(5)(a)** Authority to Enforce  
**Section 89.7(C)(5)(b)** Employee Housing  
**Section 89.7(C)(6)** Violations  
**Section 89.7(C)(6)(a)** Actions and Proceedings  
**Section 89.7(C)(6)(b)** Actions and Proceedings (For Employee Housing)  
**Section 89.7(C)(7)** Methods of Approval and Alternates  
**Section 89.7(C)(7)(a)** Alternate for Materials, Designs, Tests and Methods of Construction  
**Section 89.7(C)(7)(b)** Alternate for Materials, Designs, Tests and Methods of Construction (For Employee

Housing)

**Section 89.7(C)(8)** Fees and Plan Review

**Section 89.7(C)(8)(a)** General

**Section 89.7(C)(8)(b)** Plan Review and Time Limitations

**Section 89.7(C)(8)(c)** Retention of Plans

**Section 89.7(D)** HCD-2-Department of Housing and Community Development

**Section 89.7(D)(1)** Right of Entry For Enforcement [For HCD 2]

**Section 89.7(D)(2)** Actions and Proceedings [For HCD 2]

**Section 89.7(D)(3)** Alternate for Materials, Designs, Tests and Methods of Construction [For HCD 2]

**Section 89.8** Adopting Agency

**Section 89.9** Format

**Section 89.10** Validity

**Section 89.11** Standard Reference Documents

##### Specific Regulatory Action

Article 89 is an existing California amendment in the 2001 CEC that is being brought forward to the 2004 CEC, which provides the purpose, scope, administrative authority, and application to local enforcement agencies.

The Department is proposing the adoption of only those sections within existing Article 89 indicated above and on the attached matrix table. The numbers of each section and all references to these numbers within each section have been reformatted to be consistent with the change in the numbering format of the 2002 NEC.

The Department is proposing the modification of section 89.7(C)(2) to remove the bold font style from the title in the second paragraph. This modification will establish consistency with the administrative language within correlating Title 24 building standards, e.g. California Building Code(CBC). The Department is proposing to add the term “covered” to multifamily dwellings and repeal the word *units* to be consistent with the definition of the type of dwelling units regulated by HCD accessibility requirements.

In 89.7(C)(2) the Department is proposing to change the reference of the definition of “covered multifamily dwellings” from Chapter 2 of the California Building Code (CBC) to its present location in Chapter 11A of the CBC. The Department is proposing to add a reference to section 89.7.5 of the CEC for public accommodations. These modifications of the current references within this section will provide clarity for the user.

The Department is proposing the modification of sections 89.7(C)(1) to provide an accurate reference to 89.7.8 SFM. The Department is proposing to add the Enforcing Agency, Authority Cited, and Reference language into Sections 89.7(C)(1) and 89.7(C)(2) to provide important information to the user for clarity and to be consistent with other sections of this code, e.g. 89.7(D).

The Department is proposing the modification of section

89.7(C)(8) to include employee housing in the provisions for plan review and retention. This language will clarify and make specific requirements of the Health and Safety Code, sections 17021 and 17055 and will be consistent with other Title 24 building standard sections, e.g. CBC.

The Department is proposing the modification of section 89.7(D) to include the language permanent buildings or structures constructed within mobilehome parks and special occupancy parks which are under the control and ownership of the park operator. Furthermore, the Department is proposing to remove the language for RV parks, temporary recreational parks, travel trailer parks, and campgrounds as these are areas not under the jurisdiction of HCD 2. This language will clarify and make specific requirements of the Health and Safety Code, Mobile Home Parks Act and will be consistent with other Title 24 building standard sections, e.g. CBC.

The Department is proposing the modification of sections 89.7(D)(1) Health and Safety Code, Section 18400 and 89.3 exception, Health and Safety Code, Section 17958.8 to reflect current statutory language.

The Department is proposing the modification of section 89.4(A) to include Manufactured Homes. This modification will provide clarity for the user and reflect the terminology currently used in statute as well as the industry.

The Department is proposing the modification of section 89.5(A) by adding a reference to HSC, Section, 18909, that is currently applicable to this CEC section and repeal the reference to HSC, Section 18912 that is no longer applicable.

The Department is proposing the modification of section 89.6(B) for editorial purposes only. This modification will repeal the word *or* and insert the word *for*.

The Department is proposing the modification of the note in section 89.7(C)(2) to include references that are currently applicable to this CEC section and to repeal references to sections within this code and references to other codes that no longer apply.

**Article 90 – Introduction.** This article provides direction to the user regarding code arrangement, the rules used within, and the intent of the NEC.

#### **Specific Regulatory Action**

The Department is proposing the adoption of Article 90 without amendment. Article 90 provides the introduction to the NEC and explains the purpose of the NEC as “the practical safeguarding of persons and property from hazards arising from the use of electricity.”

#### **CHAPTER 1: General, Articles 100-110**

#### **Article 100** Definitions

#### **Article 110** Requirements for Electrical Installations

#### **Specific Regulatory Action**

The Department is proposing the adoption of Articles 100 and 110 of Chapter 1 without amendments. Article 100 contains those definitions essential to the proper application of this Code. Article 110 covers general requirements for the examination and approval, installation and use, access to and spaces about electrical conductors and equipment, and tunnel installations

#### **CHAPTER 2: Wiring and Protection, Articles 200-285**

#### **Article 200** Use and Identification of Grounded Conductors

#### **Article 210** Branch Circuits

#### **Article 215** Feeders

#### **Article 220** Branch-circuit, Feeder and Service Calculations

#### **Article 225** Outside Branch Circuits and Feeders

#### **Article 230** Services

#### **Article 240** Overcurrent Protection

#### **Article 250** Grounding

#### **Article 280** Surge Arresters

#### **Article 285** Transient Voltage Surge Suppressors: TVSSs

#### **Specific Regulatory Action**

The Department is proposing the adoption of Articles 200, 210, 215, 220, 225, 230, 240, 250, 280, and 285 of Chapter 2 without amendments. This chapter covers the topics listed above. Adoption of these articles will provide the user with code provisions for application in the construction of residential occupancies, accessory structures and permanent buildings and structures regulated by HCD.

The Department is proposing modify and relocate Sections 210-7(g) and 210-7(g.1) into Chapter 4, Section 406.3(G)(1) and 406.3(G)(2), of this code. This proposal is necessary as a result of the reorganization of the articles within the 2002 NEC.

#### **CHAPTER 3: Wiring Methods and Materials, Articles 300-398**

#### **Article 300** Wiring Methods.

#### **Article 310** Conductors for General Wiring.

#### **Article 312** Cabinets, Cutout Boxes, and Meter Socket Enclosures.

#### **Article 314** Outlet, Device, Pull and Junction Boxes, Conduit Bodies, Fittings, and Manholes.

#### **Article 320** Armored Cable: Type MC.

#### **Article 322** Flat Cable Assemblies: Type FC.

**Article 324** Flat Conductor Cable: Type FCC  
**Article 326** Integrated Gas Spacer Cable: Type IGS  
**Article 328** Medium Voltage Cable: Type MV  
**Article 330** Metal-Clad Cable: Type MC  
**Article 332** Mineral-insulated, Metal-Sheathed Cable: Type MI.  
**Article 334** Nonmetallic-Sheathed Cable: Types NM, NMC, and NMS. (W/Amendment)  
**Section 334.10** Note: [HCD 1 and HCD 2]  
**Article 336** Power and Control Tray Cable: Type TC  
**Article 338** Service-Entrance Cable: Types SE and USE  
**Article 340** Underground Feeder and Branch-Circuit Cable: Type UF  
**Article 342** Intermediate Metal Conduit: Type IMC  
**Article 344** Rigid Metal Conduit: Type RMC  
**Article 348** Flexible Metal Conduit: Type FMC  
**Article 350** Liquid tight Flexible Metal Conduit: Type LFMC  
**Article 352** Rigid Nonmetallic Conduit: Type RNC  
**Article 354** Nonmetallic Underground Conduit with Conductors: Type NUCC  
**Article 356** Liquid tight Flexible Nonmetallic Conduit: Type LFNC  
**Article 358** Electrical Metallic Tubing: Type EMT  
**Article 360** Flexible Metallic Tubing: Type FMT  
**Article 362** Electrical Nonmetallic Tubing: Type ENT  
**Article 366** Auxiliary Gutters  
**Article 368** Busways  
**Article 370** Cable bus  
**Article 372** Cellular Concrete Floor Raceways  
**Article 374** Cellular Metal Floor Raceways  
**Article 376** Metal Wireways  
**Article 378** Nonmetallic Wireways  
**Article 380** Multioutlet Assemblies  
**Article 382** Nonmetallic Extensions  
**Article 384** Strut-Type Channel Raceways  
**Article 386** Surface Metal Raceways  
**Article 388** Surface Nonmetallic Raceways  
**Article 390** Underfloor Raceways  
**Article 392** Cable Trays  
**Article 394** Concealed Knob-and-Tube Wiring (W/Amendment)  
**Section 394.12** Exception: [HCD 1] (exceptions 1 through 6)  
**Article 396** Messenger Supported Wiring  
**Article 398** Open Wiring on Insulators

### **Specific Regulatory Action**

The Department is proposing the adoption of Articles 300, 310, 312, 314, 320, 322, 324, 328, 330, 332, 336, 338, 340, 342, 344, 348, 350, 352, 354, 356, 358, 360, 362, 366, 368, 370, 372, 374, 376, 378, 380, 382, 384, 386, 388, 390, 392, 396, and 398 of Chapter 3 without amendments. Adoption of these articles will provide the user with code provisions for application in the construction of residential occupancies, accessory structures and permanent buildings and structures regulated by HCD.

The Department is proposing the adoption of Article 334 with amendment. The Department believes that the FPN of 334.10, which is not enforceable, does not provide the user with adequate direction; therefore, HCD is proposing to add the note for clarity. This note will provide the user with a specific reference code, The California Building Code, for Type III, IV, and V construction as used in Section 334.10, items (2) and (3).

The Department is proposing the adoption of Article 394 as amended for HCD 1. This previously existing article and the California amendment has been relocated from Article 324 within this chapter, with modification. The Department is proposing to repeal existing text within the body of the amended section of 394.12. The proposed language to be repealed has been incorporated by NFPA into the text of the 2002 NEC and therefore, is no longer necessary as a California Amendment.

The Department is proposing to continue the non-adoption of Integrated Gas Spacer Cable (IGS), Article 326 of the 2002 NEC. This Article was previously located in Article 325 of the 2001 CEC. The regulations covered by this article do not fall within the occupancies regulated by HCD.

## **CHAPTER 4: Equipment for General Use, Articles 400-490.**

**Article 400** Flexible Cords and Cables  
**Article 402** Fixture Wires  
**Article 404** Switches (W/Amendment for HCD 1/AC)  
**Section 404.8(C)** [For HCD 1/AC] Installation Height  
**Article 406** Receptacles, Cord Connectors, and Attachment Plugs (Caps) (W/Amendment for HCD 1/AC)  
**Section 406.3** General Installation Requirements  
 Section 406.3(G) **[For HCD 1/AC] – Installation Heights**  
 Section 406.3(G)(1) **[For HCD1/AC w/exceptions 1,2, and 3]**  
 Section 406.3(G)(2) **[For HCD1/AC]**  
**Article 408** Switchboards and Panelboards  
**Article 410** Luminaries (Lighting Fixtures), Lampholders, and Lamps  
**Article 411** Lighting Systems Operating at 30 Volts or Less  
**Article 422** Appliances  
**Article 424** Fixed Electric Space-Heating Equipment  
**Article 426** Fixed Outdoor Electric Deicing and Snow-Melting Equipment  
**Article 427** Fixed Electric Heating Equipment for Pipelines and Vessels  
**Article 430** Motors, Motor Circuits and Controllers  
**Article 440** Air-Conditioning and Refrigerating Equipment  
**Article 445** Generators  
**Article 450** Transformers and Transformer Vaults (Including Secondary Ties)  
**Article 455** Phase Converters

**Article 460** Capacitors  
**Article 470** Resistors and Reactors  
**Article 480** Storage Batteries  
**Article 490** Equipment, Over 600 Volts, Nominal

#### **Specific Regulatory Action**

The Department is proposing the adoption of Articles 400, 402, 408, 410, 411, 422, 424, 426, 427, 430, 440, 445, 450, 455, 460, 470, 480, and 490 of Chapter 4 without amendments. Adoption of these articles will provide the user with code provisions for application in the construction of residential occupancies, accessory structures and permanent buildings and structures regulated by HCD.

The Department is proposing the adoption of Article 404 with amendments. This previously existing article has been relocated from 380-8(c) and 380-8(c.1) within the 2001 CEC with modification.

The Department is proposing the adoption of Article 406 with amendments. This previously existing amendment has been relocated from 210-7(g) of the 2001 CEC into 406.3(G) with modification. 406.3 "General Installation Requirements" has been amended to include the newly relocated, sub-section 406.3(G).

The Department is proposing the adoption of Sections 404.8(C)(1), 404.8(C)(2), 406.3(G)(1) with exceptions 1,2, and 3, and 406.3(G)(2) as amended. These previously existing sections have been relocated from other chapters within this code with proposed modifications. The modified text will provide clarity to the user regarding the installation height of receptacles and will comply with the Federal Fair Housing Amendments Act. Federal regulations require all receptacle outlets within an electrical box (single or duplex receptacles), to fully comply with accessibility regulations when the building is required to meet Federal Laws. This modification ensures compliance with State Law, Government Code, Section 12955.1, which states in part *"...particular state regulations shall apply if they provide, to persons with disabilities, the same protections as, or greater protections than, the federal standards."*

#### **CHAPTER 5: Special Occupancies, Articles 500-555.**

**Article 500** Hazardous (Classified) Locations, Classes I, II, and III, Divisions 1 and 2.  
**Article 501** Class I Locations  
**Article 502** Class II Locations  
**Article 503** Class III Locations  
**Article 504** Intrinsically Safe Systems  
**Article 505** Class I, Zone 0, 1, and 2 Locations  
**Article 510** Hazardous (Classified) Locations - Specific  
**Article 511** Commercial Garages, Repair and Storage  
**Article 513** Aircraft Hangers  
**Article 514** Motor Fuel Dispensing Facilities

**Article 515** Bulk Storage Plants  
**Article 516** Spray Application, Dipping, and Coating Processes  
**Article 517** Health Care Facilities  
**Article 518** Places of Assembly  
**Article 520** Theaters, Audience Areas of Motion Picture and Television Studios, Performance Areas, and Similar Locations  
**Article 525** Carnivals, Circuses, Fairs, and Similar Events  
**Article 527** Temporary Installations  
**Article 530** Motion Picture and Television Studios and Similar Locations  
**Article 540** Motion Picture Projection Rooms  
**Article 545** Manufactured Buildings  
**Article 547** Agricultural Buildings  
**Article 550** Mobile Homes, Manufactured Homes, and Mobile Home Parks  
**Article 551** Recreational Vehicles and Recreational Vehicle Parks  
**Article 552** Park Trailers  
**Article 553** Floating Buildings  
**Article 555** Marinas and Boatyards

#### **Specific Regulatory Action**

The Department is proposing the adoption of Articles 518, 527, and 545, of Chapter 5 without amendments. Adoption of these articles will provide the user with code provisions for application in the construction of residential occupancies, accessory structures and permanent buildings and structures regulated by HCD.

The Department is proposing to not adopt Articles 500, 501, 502, 503, 504, 505, 510, 511, 513, 514, 515, 516, 517, 520, 525, 530, 540, 547, 550, 551, 552, 553, and 555 of the 2002 NEC. The regulations covered by these articles do not fall within the occupancies regulated by HCD.

#### **CHAPTER 6: Special Equipment, Articles 600-695.**

**Article 600** Electric Signs and Outline Lighting  
**Article 604** Manufactured Wiring Systems  
**Article 605** Office Furnishings (Consisting of Lightning Accessories and Wired Partitions)  
**Article 610** Cranes and Hoists  
**Article 620** Elevators, Dumbwaiters, Escalators, Moving Walks, Wheelchair Lifts, and Stairway Chair Lifts  
**Article 625** Electric Vehicle Charging System (W/SFM Amendment)  
**Article 630** Electric Welders  
**Article 640** Audio Signal Processing, Amplification, and Reproduction Equipment  
**Article 645** Information Technology Equipment  
**Article 647** Sensitive Electronic Equipment  
**Article 650** Pipe Organs  
**Article 660** X-Ray Equipment  
**Article 665** Induction and Dielectric Heating Equipment  
**Article 668** Electrolytic Cells

**Article 669** Electroplating  
**Article 670** Industrial Machinery  
**Article 675** Electrically Driven or Controlled Irrigation Machines  
**Article 680** Swimming Pools, Fountains, and Similar Installations  
**Article 685** Integrated Electrical Systems  
**Article 690** Solar Photovoltaic Systems  
**Article 692** Fuel Cell Systems  
**Article 695** Fire Pumps

#### **Specific Regulatory Action**

The Department is proposing the adoption of Articles 600, 620, 680, 690, and 692 of Chapter 6 without amendments. Adoption of these articles will provide the user with code provisions for application in the construction of residential occupancies, accessory structures and permanent buildings and structures regulated by HCD.

The Department is proposing to not adopt Articles 604, 605, 610, 630, 640, 645, 647, 650, 660, 665, 668, 669, 670, 675, 685, and 695 of the 2002 NEC. The code provisions covered by these articles do not fall within the occupancies regulated by HCD.

The Department is proposing the adoption of Article 625 with State Fire Marshall amendments.

#### **CHAPTER 7: Special Conditions, Articles 700-780.**

**Article 700** Emergency Systems  
**Article 701** Legally Required Standby Systems  
**Article 702** Optional Standby Systems  
**Article 705** Interconnected Electric Power Production Sources  
**Article 720** Circuits and Equipment Operating at Less Than 50 Volts  
**Article 725** Class 1, Class 2, and Class 3 Remote-Control, Signaling, and Power-Limited Circuits.  
**Article 727** Instrumentation Tray cable: Type ITC.  
**Article 760** Fire Alarm Systems  
**Article 770** Optical Fiber Cables and Raceways  
**Article 780** Closed-Loop and Programmed Power Distribution

#### **Specific Regulatory Action**

The Department is proposing the adoption of Articles 700, 702, 705, 720, 725, 727, and 770 of Chapter 7 without amendments. Adoption of these articles will provide the user with code provisions for application in the construction of residential occupancies, accessory structures and permanent buildings and structures regulated by HCD.

The Department is proposing to not adopt Articles 701, 760, and 780 of the 2002 NEC. The code provisions

covered by these articles do not fall within the occupancies regulated by HCD.

#### **CHAPTER 8: Communications Systems, Articles 800-830.**

**Article 800** Communication Circuits  
**Article 810** Radio and Television Equipment  
**Article 820** Community Antenna Television and Radio Distribution Systems  
**Article 830** Network-Powered Broadband Communications Systems

#### **Specific Regulatory Action**

The Department is proposing to not adopt Chapter 8 of the 2002 NEC. The Department believes that a fact-finding analysis may be necessary in the future to determine the applicability of the articles in Chapter 8 within occupancies regulated by HCD.

#### **CHAPTER 9: Tables**

**Table 1** Percent of Cross Section of Conduit and Tubing for Connectors

**Table 4** Dimensions and Percent Area of Conduit and Tubing (Areas of Conduit or Tubing for the Combinations of Wires Permitted in Table 1, Chapter 9)

**Table 5** Dimensions of Insulated Conductors and Fixture Wires

**Table 5A** Compact Aluminum Building Wire Nominal Dimensions and Areas

**Table 8** Conductor Properties

**Table 9** Alternating-Current Resistance and Reactance for 600-Volt Cables, 3-Phase, 60 HZ, 75°C (167°F)-Three Single Conductors in Conduit

**Table 11(A)** Class 2 and Class 3 Alternating-Current Power Source Limitations

**Table 11(B)** Class 2 and Class 3 Direct-Current Power Source Limitations

**Table 12(A)** PLFA Alternating-Current Power Source Limitations

**Table 12(B)** PLFA Direct-Current Power Source Limitations

#### **Specific Regulatory Action**

The Department is proposing the adoption of the Tables in Chapter 9 without amendments. The Tables in Chapter 9 provide a useful tool for the user and the information found in the tables are applicable as referenced to the articles within this code.

#### **ANNEXES**

**ANNEX A:** Product Safety Standards.  
**ANNEX B:** Application Information for Ampacity Calculation.  
**ANNEX C:** Conduit and Tubing Fill Tables for Conductors and Fixture Wires of the Same Size.  
**ANNEX D:** Examples.  
**ANNEX E:** Types of Construction.  
**ANNEX F:** Cross-Reference Tables

**Specific Regulatory Action**

The Department is proposing to not adopt Annexes A, B, C, D, E, and F of the 2002 NEC. The language within the annexes is non-mandatory and is not part of the requirements or recommendations of the 2002 NEC; it has been included for informational purposes only. The Annexes are available for use by local enforcement agencies without HCD adoption

Note: The following Articles were relocated by NFPA in the NEC. Furthermore, the following is for informational purposes only and is not part of this rulemaking package.



**Chapter 3 Cross-Reference from the 1999 NEC to the 2002 NEC**

<b>1999 NEC</b>	<b>2002 NEC</b>	<b>Article Title</b>
300	300	Wiring Methods
305	527	Temporary Installations
310	310	Conductors for General Wiring
318	392	Cable Trays
320	398	Open Wiring on Insulators
321	396	Messenger Supported Wiring
324	394	Concealed Knob-and-Tube Wiring
325	326	Integrated Gas Spacer Cable: Type IGS
326	328	Medium Voltage Cable: Type MV
328	324	Flat Conductor Cable: Type FCC
330	332	Mineral-Insulated, Metal-Sheathed Cable: Type MI
331	362	Electrical Nonmetallic Tubing: Type ENT
333	320	Armored Cable: Type AC
334	330	Metal-Clad Cable: Type MC
336	334	Nonmetallic-Sheathed Cable: Types NM, NMC, and NMS
338	338	Service-Entrance Cable: Types SE and USE
339	340	Underground Feeder and Branch-Circuit Cable: Type UF
340	336	Power and Control Tray Cable: Type TC
342	382	Nonmetallic Extensions
343	354	Nonmetallic Underground Conduit with Conductors: Type NUCC
345	342	Intermediate Metal Conduit: Type IMC
346	344	Rigid Metal Conduit: Type RMC
347	352	Rigid Nonmetallic Conduit: Type RNC
348	358	Electrical Metallic Tubing: Type EMT
349	360	Flexible Metallic Tubing: Type FMT
350	348	Flexible Metal Conduit: Type FMC
351 (Part A)	350	Liquidtight Flexible Metal Conduit: Type LFMC
351 (Part B)	356	Liquidtight Flexible Nonmetallic Conduit: Type LFNC
352 (Part C)	384	Strut-Type Channel Raceway
352 (Part A)	386	Surface Metal Raceways
352 (Part B)	388	Surface Nonmetallic Raceways
353	380	Multioutlet Assembly
354	390	Underfloor Raceways
356	374	Cellular Metal Floor Raceways
358	372	Cellular Concrete Floor Raceways
362 (Part A)	376	Metal Wireways
362 (Part B)	378	Nonmetallic Wireways
363	322	Flat Cable Assemblies: Type FC
364	368	Busways
365	370	Cablebus
370	314	Outlet, Device, Pull, and Junction Boxes; Conduit Bodies; Fittings; and Manholes
373	312	Cabinets, Cutout Boxes, and Meter Socket Enclosures
374	366	Auxiliary Gutters
380	404	Switches
384	408	Switchboards and Panelboards

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## DETERMINATIONS

### AN IDENTIFICATION OF EACH TECHNICAL, THEORETICAL, AND EMPIRICAL STUDY, REPORT, OR SIMILAR DOCUMENT UPON WHICH THE AGENCY IS RELYING IN PROPOSING THE ADOPTION, AMENDMENT, OR REPEAL.

None.

### ALTERNATIVES TO THE REGULATION

**None.** There were no alternatives available to the Department. The Department is required by statute to adopt these model codes by reference.

### ALTERNATIVES THE (AGENCY) HAS IDENTIFIED THAT WOULD LESSEN ANY ADVERSE IMPACT ON SMALL BUSINESS

The Department has determined that this regulatory action would have no significant adverse economic impact on California business enterprises and individuals, including the ability of California businesses to compete with businesses in other states. (See *Economic Impact Of The Proposed National Electrical Code Regulations On Private Persons and Businesses In The State of California* in this rulemaking file.)

### FACTS, EVIDENCE, DOCUMENTS, TESTIMONY, OR OTHER EVIDENCE OF NO SIGNIFICANT ADVERSE ECONOMIC IMPACT ON BUSINESS.

None

### FISCAL IMPACT STATEMENT (Also See Attached Form 399)

Cost or Savings to any state agency: **None**

Cost to any local agency required to be reimbursed under Part 7 (commencing with Section 17500) of Division 4: **None**

Cost to any school district required to be reimbursed under Part 7 (commencing with Section 17500) of Division 4: **None**

Other nondiscretionary cost or savings imposed on local agencies: **None**

Cost or savings in federal funding to the state: **None**

Estimate: **None**

### INITIAL DETERMINATION OF STATEWIDE ADVERSE ECONOMIC IMPACT DIRECTLY AFFECTING BUSINESSES

The Department of Housing and Community Development has made an initial determination that the proposed action will not have a significant statewide

adverse economic impact directly affecting business, including the ability of California businesses to compete in other states. (See *Economic Impact of the Proposed National Electrical Code Regulations on Private Persons and Businesses in the State of California* in this rulemaking file.)

### FINDING OF NECESSITY FOR THE PUBLIC'S HEALTH, SAFETY, OR WELFARE

The Department of Housing and Community Development has made an assessment of the proposal and has determined that a report is not required.

### COST IMPACT ON REPRESENTATIVE PRIVATE PERSON OR BUSINESS

The Department of Housing and Community Development is not aware of any cost impacts that a representative private person or business would necessarily incur in reasonable compliance with the proposed action.

### ASSESSMENT OF EFFECT OF REGULATIONS UPON JOBS AND BUSINESS EXPANSION, ELIMINATION OR CREATION

The Department of Housing and Community Development has initially assessed whether or not and to what extent this proposal will affect the following:

- ♦ The creation or elimination of jobs within the State of California.

These regulations will not affect the creation of or cause the elimination of jobs within the State of California.

- ♦ The creation of new businesses or the elimination of existing businesses within the State of California.

These regulations will not affect the creation of or the elimination of existing business within the State of California.

- ♦ The expansion of businesses currently doing business with the State of California.

These regulations will not affect the expansion of businesses currently doing business within the State of California.

(See *Economic Impact of the Proposed National Electrical Code Regulations on Private Persons and Businesses in the State of California* in this rulemaking file.)

### INITIAL DETERMINATION OF SIGNIFICANT EFFECT ON HOUSING COSTS

The Department of Housing and Community Development has initially determined that this proposal would not have a significant effect on housing costs. The California Building Standards Commission (CBSC) contact designated below will make the Department of Housing and Community Development's initial evaluation of the effect of the proposed regulatory action on housing costs available upon request. (See *Economic Impact of the Proposed National Electrical Code Regulations on Private Persons and Businesses in the State of California* in this rulemaking file.)

**STAFF FINDINGS**

Under Article 89, Section 89.7 Application, Item 2 HCD 1/AC Note there are references to section 404.8(C) & 406.3(G). CBSC staff found this reference to be confusing.

**ITEM 10 – Committee Recommendations**

A	AA	D	FS
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(END OF ITEM)

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## EXPRESS TERMS

### ARTICLE 89 - Administration

*{The SFM is proposing to continue the adoption by reference of various sections of the State Article 89 as indicated below. (See also the Matrix Adoption Tables.)*

*The model code publisher has changed the numbering format of the 2002 Edition of the NEC. Therefore the SFM's Notice package containing the Initial Statement of Reasons and the Express Terms reflects said format change.*

**089-1. 89.1 Title.** *The provisions contained in this Code shall be known as the "California Electrical Code," a portion of the "California Building Standards Code," as defined in the "California Building Standards Law" commencing with Section 18901 of the Health and Safety Code, and may be cited and referred to as the "California Electrical Code." The unqualified words "This Code" as used herein, refer only to the California Electrical Code, and do not include any other portions of the California Building Standards Code. These provisions may also be cited as "C.E.C." or "Part 3" within other parts of the California Building Standards Code (Title 24).*

**089-2 89.2 Purpose.** *The purpose of this Code is to provide minimum standards to safeguard life or limb, health, property and public welfare, and to protect against hazards that may arise from the use of electricity by regulating and controlling the design, construction, installation, quality of materials, location and operation of electrical equipment, wiring and systems.*

**089-3. 89.3 Scope.** *The provisions of this Code and the building standards contained herein, including those standards adopted by reference without amendments, where specifically adopted by the listed agencies under their cited authority and enforced by the enforcing agency specified in Section ~~089-8~~ 18909 of the Health and Safety Code, shall apply to the construction, alteration, moving, demolition, repair and use of all electrical equipment, wiring and systems in or on any building or structure or outdoors on any premise or property; except such electrical equipment, wiring and systems which are expressly exempted by Section ~~089-4~~ 18909 of the Health and Safety Code.*

**089-4. 89.4 Exempted from this Code.** *This Code does not cover:*

**(a) (A)** *Installations in ships, watercraft other than floating dwelling units, railway rolling stock, aircraft, automotive vehicles, commercial coaches, mobilehomes, and recreational vehicles.*

**(b) (B)** *Installations underground in mines, mine shafts and tunnels.*

**(c) (C)** *Installations of railways for generation, transformation, transmission, or distribution of power used exclusively for operation of rolling stock or installations used exclusively for signaling and communication purposes.*

**(d) (D)** *Installation of communication equipment under the exclusive control of communication utilities, located outdoors or in building spaces used exclusively for such installations.*

**(e) (E)** *Installations under the exclusive control of electrical utilities for the purpose of communication, or metering; or for the generation, control, transformation, transmission, and distribution of electrical energy located in buildings used exclusively by utilities for such purposes or located outdoors on property owned or leased by the utility or on public highways, streets, roads, etc., or outdoors by established rights on private property.*

**Exception to (d) (D) and (e) (E):** *In places of employment, the following shall apply: installations of conductors, equipment and associated enclosures subject to the jurisdiction of the California Public Utilities Commission, that are owned, operated and maintained by an electric, communications or electric railway utility, but not including conduit, vaults, and other like enclosures containing conductors and equipment of such a utility when located indoors or on premises not used exclusively for utility purposes, but do not apply to the utility's conductors and equipment therein.*

**(f) (F)** *Installations on highways or bridges.*

**089-5. 89.5 Non-Building Standards, Orders and Regulations.**

**(a) (A)** *Requirements contained in the National Electrical Code (NEC), or in any other referenced code, document, or standard, which are not building standards as defined in Section ~~18912~~ 18909 of the Health and Safety Code, shall not be construed as a part of the provisions of this Code.*

**(b) (B)** *For the applicability of regulations, safety and other orders, and standards, which relate to the administration, enforcement, maintenance, operation and similar non-building standards, see other titles of the California Code of Regulations.*

**089-6. 89.6 Order of Precedence and Use.**

**(a) (A)** *In the event of any difference between the provisions of this Code and the National Electrical Code (NEC), or between this Code and the provisions of any other referenced code, document or standard, the text of this Code shall govern. Where a specific provision varies*

from a general provision, the specific provisions shall apply.

~~(b) (B)~~ If a section of this Code makes a cross-reference to another section or table in the National Electrical Code (NEC), such cross-referencing shall be interpreted to mean that which is shown in the NEC unless the referenced section or table has been amended or modified in this Code ~~or~~ for the particular enforcing agency.

~~(c) (C)~~ If a section in the National Electrical Code (NEC) makes a cross-reference to another section or table in the NEC, such cross-referencing shall be interpreted to mean that which is shown in the NEC unless the referenced section or table has been amended or modified in this Code for the particular enforcing agency.

~~(d) (D)~~ When adopted by a State agency, and approved by the Commission, the text of amended provisions contained in this Code shall take precedence over the corresponding provisions of the National Electrical Code (NEC).

#### **089-7. 89.7. Application.**

#### **8. H. SFM – Office of the State Fire Marshal**

~~Application-~~ All high-rise buildings; assembly, educational, and institutional buildings; all other occupancies when auxiliary or accessory to an assembly, educational, or institutional building; organized camps and State-owned or occupied buildings including State colleges and universities; tents, awnings, or other fabric enclosures used in connection with any occupancy.

~~Enforcing Agency-~~ Local fire authority. State Fire Marshal where no local fire authority exists and for State-owned or occupied buildings.

~~Authority Cited-~~ Health and Safety Code Sections 13108, 131116, 13143, 13143.6, 13211 and 18897.3.

~~Reference-~~ Health and Safety Code Sections 13100 through 13146.5, 13210 through 13216, and 18897 through 18897.7.

~~Application -~~ Any building or structure used or intended for use as an asylum, jail, mental hospital, hospital, sanitarium, home for the aged, children's nursery, children's home, school or any similar occupancy of any capacity.

~~Any theater, dancehall, skating rink, auditorium, assembly hall, meeting hall, nightclub, fair building, or similar place of assemblage where 50 or more persons may gather together in a building, room or structure for the purpose of amusement, entertainment, instruction, deliberation, worship, drinking or dining, awaiting transportation, or education.~~

Authority Cited-Health and Safety Code Section 13143.  
Reference-Health and Safety Code Section 13143.

#### **Small Family Day-care Homes**

Authority Cited-Health and Safety Code Sections 1597.45, 1597.54, 13143 and 17921.  
Reference-Health and Safety Code Section 13143.

#### **Large Family Day-care Homes**

Authority Cited-Health and Safety Code Sections 1597.46, 1597.54 and 17921.  
Reference-Health and Safety Code Section 13143.

#### **Residential Facilities and Residential Facilities for the Elderly**

Authority Cited-Health and Safety Code Section 13113 and 13131.5  
Reference-Health and Safety Code Section 13143.

#### **Any state institution or other state-owned or state-occupied building.**

Authority Cited-Health and Safety Code Section 13108.  
Reference-Health and Safety Code Section 13143.

#### **High-rise Structures**

Authority Cited-Health and Safety Code Section 13211.  
Reference-Health and Safety Code Section 13143.

#### **Motion Picture Production Studios**

Authority Cited-Health and Safety Code Section 13143.1.  
Reference-Health and Safety Code Section 13143.

#### **Any state institution or other state-owned or state-occupied building.**

Authority Cited-Health and Safety Code Section 13108.  
Reference-Health and Safety Code Section 13143.

#### **High-rise Structures**

Authority Cited-Health and Safety Code Section 13211.  
Reference-Health and Safety Code Section 13143.

#### **Motion Picture Production Studios**

Authority Cited-Health and Safety Code Section 13143.1.  
Reference-Health and Safety Code Section 13143.

#### **Organized Camps**

Authority Cited-Health and Safety Code Section 18897.3.  
Reference-Health and Safety Code Section 13143.

All hotels, motels, lodging houses, apartment houses and dwellings, including congregate residences and buildings and structures accessory thereto.

Multiple-story structures existing on January 1, 1975, let for human habitation, including and limited to, hotels, motels, apartment houses, less than 75 feet (22 860 mm) above the lowest floor level having building access, wherein rooms used for sleeping are let above the ground floor.  
Authority Cited-Health and Safety Code Sections 13143.2

and 17921.  
Reference-Health and Safety Code Section 13143.

Certified family-care homes, out-of-home placement facilities, halfway houses, drug and/or alcohol rehabilitation facilities and any building or structure used or intended for use as a home or institution for the housing of any person of any age when such person is referred to or placed within such home or institution for protective social care and supervision services by any governmental agency.

Authority Cited-Health and Safety Code Section 13143 and 13143.6.  
Reference-Health and Safety Code Section 13143.6.

**Tents, awnings or other fabric enclosures used in connection with any occupancy.**  
Authority Cited-Health and Safety Code Section 13116.  
Reference-Health and Safety Code Section 13116.

**Fire alarm devices, equipment and systems, in connection with any occupancy.**  
Authority Cited-Health and Safety Code Sections 13114 and 13143.  
Reference-Health and Safety Code Section 13114.

**Hazardous materials.**  
Authority Cited-Health and Safety Code Sections 13143.9.  
Reference-Health and Safety Code Section 13143.9.

**Flammable and combustible liquids.**  
Authority Cited-Health and Safety Code Sections 13143.6.  
Reference-Health and Safety Code Section 13143.6.

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**089-8. 89.8 Adopting Agency.** An “Adopting agency” is a State agency, excluding an agency in the judicial or legislative department of the State Government, which is responsible for the administration of a program and which as promulgated, adopted and submitted to the Commission for its approval proposed building standards for such programs. “Adopting agency” may include boards, commissions, committees, departments, divisions, officers, and other subdivisions of State Government.

**89-9. 89.9. Format.** The California Electrical Code, a part of the California Building Standards Code, adopts the National Electrical Code (NEC) by reference on an article-by-article basis. Amendments or additions to the provisions of the NEC by each adopting agency are adopted on a section by section or subsection by subsection basis, and follow the NEC format using the same titles, bold face headings and general text arrangement, except where the commission has approved a format variance.

**89-10. 89.10. Validity.** If any chapter, article, section,

subsection, paragraph, sentence, clause, or phrase of this Code is for any reason held to be unconstitutional, contrary to statute, exceeding the authority of the State as stipulated by statutes, or otherwise inoperative, such decisions shall not affect the validity of the remaining portions of this Code.

## **89-12. 89.11. Standard Reference Documents.**

**(a) (A)** The codes, publications, and standards adopted in the Matrix Adoption or referred to in this Code, including other codes, publications, and standards referred to therein, are by title and date of publication, hereby adopted as standard reference documents of this code.

**(b) (B)** Such reference to other documents shall be made in the form of either an Internal citation within the text or a fine print note (utilizing a smaller typographical alphabet letter size), and shall be a specific edition of the referenced document. Internal citations appearing within the text of a building standard are enforceable, and each citation must be checked for accuracy and application. Fine print notes, which appear beneath the applicable text of the building standard or Code section are explanatory of permissive and are not enforceable.

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## **CHAPTER 1: General - Articles 100 and 110**

The SFM is proposing the adoption by reference the entire Article 100 – Definitions without SFM amendments.

The SFM is proposing the adoption by reference the entire Article 110-Requirements for Electrical Installations without SFM amendments.

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## **CHAPTER 2: Wiring and Protection - Articles 225 and 250**

The SFM is proposing the adoption by reference of only those sections listed below from Article 225-Article Outside Branch Circuits and Feeders, without SFM amendments.

### **225-19 (e) 225.19 (E) Zone for Fire Ladders.**

The SFM is proposing the adoption by reference of only those sections listed below from Article 250-Grounding, without SFM amendments.

### **250-110(i) 250.112(I) Power-Limited Remote-Control, Signaling, and Fire Alarm Circuits.**

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## **CHAPTER 3: Wiring Methods and Materials, Articles 300, 314, 320, 330, 332, 334, and 362**

The SFM is proposing the adoption by reference of only

those sections listed below from Article 300-Wiring Methods, without SFM amendments.

**~~300-24~~ 300.21 Spread of Fire or Products of Combustion.**

**~~300-22~~ 300.22 Wiring in Ducts, Plenums, and Other Air-Handling Spaces.**

*{The model code publisher of the 2001 California Electrical Code (CEC) has located the provisions of Article 370 into Article 314 of the 2002 NEC. The SFM is proposing to continue the adoption of this section as shown below.}*

The SFM is proposing the adoption by reference of only those sections listed below from Article 314-Outlet, Device, Pull and Junction Boxes, Conduit Bodies and Fittings, without SFM amendments.

**~~370-15~~ 314.15 Damp, Wet, or Hazardous (Classified Locations).**

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*{The model code publisher of the 2001 California Electrical Code (CEC) has located the provisions of Article 333 into Article 320 of the 2002 NEC. The SFM is proposing to continue the adoption of this section as shown below.}*

*The SFM is proposing the adoption by reference of only those sections listed below from Article 320-Armored Cable: Type AC, without SFM amendments.*

**~~333-4~~ 320.2 Definition.**

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*{The model code publisher of the 2001 California Electrical Code (CEC) has located the provisions of Article 334 into Article 330 of the 2002 NEC. The SFM is proposing to continue the adoption of this section as shown below.}*

The SFM is proposing the adoption by reference of only those sections listed below from Article 330-Metal-Clad Cable: Type MC, without SFM amendments.

**~~334-4~~ 330.2 Definition.**

**~~334-3~~ 330.10 Uses Permitted.**

**~~334-4~~ 330.12 Uses Not Permitted.**

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*{The model code publisher of the 2001 California Electrical Code (CEC) has located the provisions of Article 330 into Article 332 of the 2002 NEC. The SFM is proposing to continue the adoption of this section as shown below.}*

The SFM is proposing the adoption by reference of only those sections listed below from Article 332-Mineral-Insulated, Metal-Sheathed Cable: Type MI, without SFM amendments.

**~~330-4~~ 332.2 Definition.**

**~~330-3~~ 332.10 Uses Permitted.**

**~~330-4~~ 332.12 Uses Not Permitted.**

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*{The model code publisher of the 2001 California Electrical Code (CEC) has located the provisions of Article 336 into Article 334 of the 2002 NEC. The SFM is proposing to continue the adoption of this section as shown below.}*

The SFM is proposing the adoption by reference of only those sections listed below from Article 334-Nonmetallic Sheathed Cable Types NM, NMC, and NMS, without SFM amendments.

**~~336-4(a)~~ 334.10-(A) Type NM.**

**~~336-4(b)~~ 334.10-(B) Type NMC.**

**~~336-5~~ 334.12 Uses Not Permitted**

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*{The model code publisher of the 2001 California Electrical Code (CEC) has located the provisions of Article 331 into Article 362 of the 2002 NEC. The SFM is proposing to continue the adoption of this section as shown below.}*

The SFM is proposing the adoption by reference of only those sections listed below from Article 362-Electrical Nonmetallic Tubing, without SFM amendments.

**~~334-4~~ 362.2 Definition.**

**~~334-3~~ 362.10 Uses Permitted.**

**~~334-4~~ 362.12 Uses Not Permitted.**

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**CHAPTER 4: Equipment for General Use, Articles 400, 410, 422, and 450.**

The SFM is proposing the adoption by reference of only those sections listed below from Article 400-Flexible Cords and Cables, without SFM amendments.

**~~400-6~~ 400.6 Markings.**

**~~400-7~~ 400.7 Uses Permitted.**

**~~400-8~~ 400.8 Uses Not Permitted.**

**~~400-9~~ 400.9 Splices.**

**~~400-10~~ 400.10 Pull at Joints and Terminals.**

**~~400-12~~ 400.12 Minimum Size.**

**~~400-13~~ 400.13 Overcurrent Protection.**

**~~400-14~~ 400.14 Protection from Damage.**

**~~400-30~~ 400.30 Scope.**

**~~400-34~~ 400.31 Construction.**

**~~400-32~~ 400.32 Shielding.**



**400-33 400.33 Grounding.**  
**400-34 400.34 Minimum Bending Radii.**  
**400-35 400.35 Fittings.**  
**400-36 400.36 Splices and Terminations.**

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The SFM is proposing the adoption by reference of only those sections listed below from Article 410-Lighting Fixtures, Lamp holders, Lamps, and Receptacles, without SFM amendments.

**410-5 410.5 Fixtures Near Combustible Material.**  
**410-6 410.6 Fixtures Over Combustible Material.**  
**410-8(d) 410.8(D) Location.**  
**410-12 410.12 Outlet Boxes to Be Covered.**  
**410-13 410.13 Covering of Combustible Material at Outlet Boxes.**  
**410-86 410.86(C) Adjacent to Combustible Materials.**

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The SFM is proposing the adoption by reference of only those sections listed below from Article 422-Appliances without SFM amendments.

**422-10 422.10 Branch-Circuit Rating.**  
**422-11 422.11 Overcurrent Protection.**  
**422-12 422.12 Central Heating Equipment.**  
**422-8(a), (b), (c) NEC 422.16 Flexible Cords.**

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The SFM is proposing the adoption by reference of only those sections listed below from Article 450-Transformers and Transformer Vaults (Including Secondary Ties) without SFM amendments.

**450-13 450.13 Accessibility.**  
**450-21 450.21 Dry-Type Transformers Installed Indoors.**  
**450-23 450.23 Less-Flammable Liquid-Insulated Transformers.**  
**450-24 450.24 Nonflammable Fluid Insulated Transformers.**  
**450-26 450.26 Oil-Insulated Transformers Installed Indoors.**  
**450-27 450.27 Oil-Insulated Transformers Installed Outdoors.**  
**450-41 450.41 Location.**  
**450-48 450.48 Storage in Vaults.**

## **CHAPTER 5: SPECIAL OCCUPANCIES, Articles 500, 501, 502, 503 and 527.**

The SFM is proposing the adoption by reference the entire Article 500-Hazardous (Classified) Locations, Classes I, II, and III, Divisions 1 and 2 without SFM amendments.

The SFM is proposing the adoption by reference the entire Article 501-Class I Locations without SFM amendments.

The SFM is proposing the adoption by reference the entire Article 502-Class II Locations without SFM amendments.

The SFM is proposing the adoption by reference the entire Article 503-Class III Locations without SFM amendments.

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{The model code publisher of the 2001 California Electrical Code (CEC) has located the provisions of Article 305 into Article 527 of the 2002 NEC. The SFM is proposing to continue the adoption and amendments of this section as shown below.}

*The SFM is proposing the adoption by reference of entire Article 527-Temporary Wiring, as amended. The SFM is also proposing to maintain the existing SFM amendments of the 2001 CEC Section 305-3(c) into Section 527.3(C) of the 2004 CEC as shown below.*

**305-3(e) 527.3 (C) Emergencies and Tests.** Temporary electrical power and lighting installations shall be permitted during emergencies and for tests, experiments, and developmental work [For SFM] as approved by the authority having jurisdiction.

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## **CHAPTER 6: SPECIAL EQUIPMENT, Article 625**

The SFM is proposing the adoption by reference of the entire Article 625-Electric Vehicle Charging System Equipment as amended. The SFM is also proposing to maintain the existing SFM amendments of the 2001 CEC Section 625-29(d) into Section 625.12(D) of the 2004 CEC as shown below.

**625-29(d) 625.29(D) Ventilation Required.** Where the electric vehicle supply equipment listed or labeled as suitable for charging electric vehicles that require ventilation for indoor charging and marked in accordance with Section 625(C), mechanical ventilation, such as fan, shall be provided as specified in the California Building Code. (Note that the remaining provisions of NEC Section 625.29 are not adopted in the State of California.) ~~The ventilation shall include both supply and exhaust equipment and shall be permanently installed and located to intake from, and vent directly to, the outdoors. Positive pressure ventilation systems shall be permitted only in buildings or areas that have been specifically designed and approved for that application. Mechanical ventilation requirements shall be determined by one of the methods specified in 625.29(D)(1) through (D)(4).~~

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## **CHAPTER 7: SPECIAL CONDITIONS, Articles 700, 701, 702, 725, and 760.**

The SFM is proposing the adoption by reference of the entire Article 700-Emergency Systems. The SFM is also proposing to maintain the existing SFM amendments of

the 2001 CEC Section 700-12(b)(2) into Section 700.12(B)(2) of the 2004 CEC as shown below.

**~~700-12(b)(2)~~ 700.12(B)(2) Generator Set.** Where internal combustion engines are used as the prime mover, an on-site fuel supply shall be provided with an on-premise fuel supply sufficient for not less than 2 hours full-demanded operation of the system. Where power is needed for the operation of the fuel transfer pumps to deliver fuel to a generator set day tank, this pump shall be connected to the emergency power system.

**[Exceptions for SFM, OSHPD 1, 2, 3, & 4]**

**Exception No. 1:** *The on-premise fuel supply shall be sufficient for not less than 24 hours full-demand operation in acute general care hospitals and correctional treatment centers that provide optional services. For acute care hospital facilities required to meet NPC-5, the on-premise fuel supply shall be sufficient for no less than 72 hours full-demand operations.*

**Exception No. 2:** *The on-premise fuel supply shall be sufficient for not less than 6 hours full-demand operation in the following health facilities of seven or more beds: correctional treatment centers that provide only basic services, acute psychiatric hospitals, intermediate care facilities, and skilled nursing facilities.*

**Exception No. 3:** *The on-premise fuel supply shall be sufficient for not less than 4 hours full-demand operation in ambulatory surgical clinics.*

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The SFM is proposing the adoption by reference the entire Article 701-Legally Required Standby Systems without SFM amendments.

The SFM is proposing the adoption by reference the entire Article 702-Optional Standby Systems without SFM amendments.

The SFM is proposing the adoption by reference the entire Article 725-Class 1, Class 2, and Class 3 Remote-Control, Signaling and Power-Limited Circuits without SFM amendments.

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The SFM is proposing the adoption by reference the entire Article 760-Fire Alarm Systems. The SFM is also proposing to maintain the existing SFM amendments of the 2001 CEC Section 760-1.1 into Section 760.1.1 of the 2004 CEC as shown below.

**760-1.1 760.1.1 [For SFM] Equipment and Systems.**  
*Fire alarm equipment and systems required to be installed in any occupancy within the scope of these regulations shall conform to the applicable performance and construction standards specified in NFPA 72-1999.*

**THE FOLLOWING ARE THE REASONS FOR THIS PROPOSED ACTION**

**INITIAL STATEMENT OF REASONS**

*The Administrative Procedure Act (APA) requires that an Initial Statement of Reasons be available to the public upon request when a rulemaking action is being undertaken. The APA requires the following information as it pertains to this particular rulemaking:*

**STATEMENT OF SPECIFIC PURPOSE AND RATIONALE:**

The specific purpose of this rulemaking effort as a whole is as follows:

- ◆ The SFM is proposing to the California Building Standards Commission (CBSC) that they adopt the 2002 Edition of the National Electrical Code to be used as a reference standard for the placement of SFM's existing regulatory amendments of the 2001 California Electrical Code.
- ◆ Health and Safety Code Section 17921 requires the SFM to adopt, amend and or repeal regulations for the protection of the public health, safety and general welfare of the public.
- ◆ Health and Safety Code Section 18928 requires the SFM, when proposing the adoption of a model code, national standard, or specification shall reference the most recent edition of the applicable model code, national standard, or specification.

Taken as a whole, the SFM's proposed rulemaking for the 2004 CEC is reasonably necessary to carry out the purpose for which it is proposed.

**STATEMENT OF SPECIFIC PURPOSE OF EACH ADOPTION AND RATIONALE AS DETERMINED BY THE SFM**

The specific purpose of the SFM's proposed adoption by reference of the 2002 NEC is identified in Health and Safety Code (H&SC) §18928 (a) that requires each state agency adopting or proposing adoption of a model code, national standard, or specification shall reference the most recent edition of applicable model codes, national

standards, or specifications. Therefore, since there are no other model codes available for consideration by the SFM, the SFM is required to propose that the California Building Standards Commission (CBSC) adopt the 2002 NEC to the as the foundation of the 2004 CEC with or without SFM amendments as listed below.

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## ARTICLE 89 CA- ADMINISTRATION

*{The SFM is proposing the adoption by reference various sections listed below from California Article 89-Administration.}*

<b>Section 89.1</b>	<b>Title.</b>
<b>Section 89.2</b>	<b>Purpose.</b>
<b>Section 89.3</b>	<b>Scope.</b>
<b>Section 89.4</b>	<b>Exempted from this Code.</b>
<b>Section 89.5</b>	<b>Non-Building Standards, Orders and Regulations.</b>
<b>Section 89.6</b>	<b>Order of Precedence and Use.</b>
<b>Section 89.7</b>	<b>Application.</b>
<b>Section 89.7(H)</b>	<b>SFM-Office of the State Fire Marshal.</b>
<b>Section 89.8</b>	<b>Adopting Agency.</b>
<b>Section 89.9</b>	<b>Format.</b>
<b>Section 89.10</b>	<b>Validity.</b>
<b>Section 89.11</b>	<b>Standard and Reference Documents.</b>

The actions described above are reasonably necessary to carry out the purpose for which it is proposed. The rationale for these actions is to establish minimum requirements for the prevention of fire and for the protection of life and property against fire and panic in any building or structure used or intended for use as an asylum, jail, mental hospital, hospital, home for the elderly, children's nursery, children's home or institution, school, or any similar occupancy of any capacity, and in any assembly occupancy where 50 or more persons may gather.

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## CHAPTER 1: General - Articles 100 and 110

*{The SFM is proposing the adoption by reference the entire Article 100 – Definitions without SFM amendments.}*

*{The SFM is proposing the adoption by reference the entire Article 110 - Requirements for Electrical Installations without SFM amendments.}*

The actions described above are reasonably necessary to carry out the purpose for which it is proposed. The rationale for these actions is to establish minimum requirements for the prevention of fire and for the protection of life and property against fire and panic in any building or structure used or intended for use as an asylum, jail, mental hospital, hospital, home for the elderly, children's nursery, children's home or institution,

school, or any similar occupancy of any capacity, and in any assembly occupancy where 50 or more persons may gather.

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## CHAPTER 2: Wiring and Protection - Articles 225 and 250

*{The SFM is proposing the adoption by reference of only those sections listed below from Article 225 - Outside Branch Circuits and Feeders, without SFM amendments.}*

### Section 225.19(E) Zone for Fire ladders.

*{The SFM is proposing the adoption by reference of only those sections listed below from Article 250 – Grounding, without SFM amendments.}*

### Section 250.112(I) Power-Limited Remote-Control, Signaling, and Fire Alarm Circuits.

The actions described above are reasonably necessary to carry out the purpose for which it is proposed. The rationale of these actions is to establish minimum requirements for the prevention of fire and for the protection of life and property against fire and panic in any building or structure used or intended for use as an asylum, jail, mental hospital, hospital, home for the elderly, children's nursery, children's home or institution, school, or any similar occupancy of any capacity, and in any assembly occupancy where 50 or more persons may gather.

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## CHAPTER 3: Wiring Methods and Materials - Articles 300, 314, 320, 330, 332, 334, and 362

*{The SFM is proposing the adoption by reference of only those sections listed below from Article 300 - Wiring Methods, without SFM amendments.}*

### Section 300.21 Spread of Fire or Products of Combustion.

### Section 300.22 Wiring in Ducts, Plenums, and Other Air-Handling Spaces.

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*{The SFM is proposing the adoption by reference of only those sections listed below from Article 314 - Outlet, Device, Pull and Junction Boxes, Conduit Bodies and Fittings, without SFM amendments.}*

### Section 314.15 Damp, Wet, or Hazardous (Classified Locations).

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*{The SFM is proposing the adoption by reference of only those sections listed below from Article 320 – Armored Cable: Type AC, without SFM amendments.}*

**Section 320.2      Definition.**

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*{The SFM is proposing the adoption by reference of only those sections listed below from Article 330 - Metal-Clad Cable: Type MC, without SFM amendments.}*

**Section 330.2      Definition.**  
**Section 330.10      Uses Permitted.**  
**Section 330.12      Uses Not Permitted.**

*{The SFM is proposing the adoption by reference of only those sections listed below from Article 332 - Mineral-Insulated, Metal-Sheathed Cable: Type MI, without SFM amendments.}*

**Section 332.2      Definition.**  
**Section 332.10      Uses Permitted.**  
**Section 332.12      Uses Not Permitted.**

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*{The SFM is proposing the adoption by reference of only those sections listed below from Article 334 - Nonmetallic Sheathed Cable Types NM, NMC, and NMS, without SFM amendments.}*

**Section 334.10(A)    Type NM.**  
**Section 334.10(B)    Type NMC.**  
**Section 334.12      Uses Not Permitted.**

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*{The SFM is proposing the adoption by reference of only those sections listed below from Article 362 - Electrical Nonmetallic Tubing, without SFM amendments.}*

**Section 362.2      Definition.**  
**Section 362.10      Uses Permitted.**  
**Section 362.12      Uses Not Permitted.**

The actions described above are reasonably necessary to carry out the purpose for which it is proposed. The rationale of these actions is to establish minimum requirements for the prevention of fire and for the protection of life and property against fire and panic in any building or structure used or intended for use as an asylum, jail, mental hospital, hospital, home for the elderly, children's nursery, children's home or institution, school, or any similar occupancy of any capacity, and in any assembly occupancy where 50 or more persons may gather.

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**CHAPTER 4: Equipment for General Use, Articles 400,**

**410, 422, and 450**

*{The SFM is proposing the adoption by reference of only those sections listed below from Article 400 - Flexible Cords and Cables, without SFM amendments.}*

**Section 400.6      Markings.**  
**Section 400.7      Uses Permitted.**  
**Section 400.8      Uses Not Permitted.**  
**Section 400.9      Splices.**  
**Section 400.10      Pull at Joints and Terminals.**  
**Section 400.12      Minimum Size.**  
**Section 400.13      Overcurrent Protection.**  
**Section 400.14      Protection from Damage.**  
**Section 400.30      Scope.**  
**Section 400.31      Construction.**  
**Section 400.32      Shielding.**  
**Section 400.33      Grounding.**  
**Section 400.34      Minimum Bending Radii.**  
**Section 400.35      Fittings.**  
**Section 400.36      Splices and Terminations.**

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*{The SFM is proposing the adoption by reference of only those sections listed below from Article 410 - Lighting Fixtures, Lamp Holders, Lamps, and Receptacles, without SFM amendments.}*

**Section 410.5      Fixtures Near Combustible Material.**  
**Section 410.6      Fixtures Over Combustible Material.**  
**Section 410.8(D)      Location.**  
**Section 410.12      Outlet Boxes to Be Covered.**  
**Section 410.13      Covering of Combustible Material at Outlet Boxes.**  
**Section 410.86(C)    Adjacent to Combustible Materials.**

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*{The SFM is proposing the adoption by reference of only those sections listed below from Article 422 – Appliances, without SFM amendments.}*

**Section 422.10      Branch-Circuit Rating.**  
**Section 422.11      Overcurrent Protection.**  
**Section 422.12      Central Heating Equipment.**  
**Section 422.16      Flexible Cords.**

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*{The SFM is proposing the adoption by reference of only those sections listed below from Article 450 - Transformers and Transformer Vaults (Including Secondary Ties) without SFM amendments.}*

**Section 450.13      Accessibility.**  
**Section 450.21      Dry-Type Transformers Installed Indoors.**  
**Section 450.23      Less-Flammable Liquid-Insulated Transformers.**  
**Section 450.24      Nonflammable Fluid Insulated Transformers.**

- Section 450.26 Oil-Insulated Transformers Installed Indoors.**
- Section 450.27 Oil-Insulated Transformers Installed Outdoors.**
- Section 450.41 Location.**
- Section 450.48 Storage in Vaults.**

The actions described above are reasonably necessary to carry out the purpose for which it is proposed. The rationale of these actions is to establish minimum requirements for the prevention of fire and for the protection of life and property against fire and panic in any building or structure used or intended for use as an asylum, jail, mental hospital, hospital, home for the elderly, children's nursery, children's home or institution, school, or any similar occupancy of any capacity, and in any assembly occupancy where 50 or more persons may gather.

## **CHAPTER 5: Special Occupancies, Articles 500, 501, 502, 503, and 527**

The SFM is proposing the adoption by reference the entire Article 500 – Hazardous (Classified) Locations, Classes I, II, and III, Divisions 1 and 2 without SFM amendments.

The SFM is proposing the adoption by reference the entire Article 501 - Class I Locations without SFM amendments.

The SFM is proposing the adoption by reference the entire Article 502 - Class II Locations without SFM amendments.

The SFM is proposing the adoption by reference the entire Article 503 - Class III Locations without SFM amendments.

The SFM is proposing the adoption by reference the entire Article 527 – Temporary Wiring, as amended. The SFM is also proposing to maintain the existing SFM amendments of the 2001 CEC Section 305-3(c) into Section 527.3(C) of the 2004 CEC.

### **Section 527.3(C) Emergencies and Tests.**

The actions described above are reasonably necessary to carry out the purpose for which it is proposed. The rationale of these actions is to establish minimum requirements for the prevention of fire and for the protection of life and property against fire and panic in any building or structure used or intended for use as an asylum, jail, mental hospital, hospital, home for the elderly, children's nursery, children's home or institution, school, or any similar occupancy of any capacity, and in any assembly occupancy where 50 or more persons may gather.

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## **CHAPTER 6: Special Equipment, Article 625**

*{The SFM is proposing the adoption by reference the entire Article 625 – Electric Vehicle Charging System Equipment as amended. The SFM is also proposing to maintain the existing SFM amendments of the 2001 CEC Section 625-29(d) into Section 625.12(D) of the 2004 CEC.}*

### **Section 625.29(D) Ventilation Required.**

The actions described above are reasonably necessary to carry out the purpose for which it is proposed. The rationale of these actions is to establish minimum requirements for the prevention of fire and for the protection of life and property against fire and panic in any building or structure used or intended for use as an asylum, jail, mental hospital, hospital, home for the elderly, children's nursery, children's home or institution, school, or any similar occupancy of any capacity, and in any assembly occupancy where 50 or more persons may gather.

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## **CHAPTER 7: Special Conditions, Articles 700, 701, 702, 725, and 760**

*{The SFM is proposing the adoption by reference the entire Article 700 – Emergency Systems. The SFM is also proposing to maintain the existing SFM amendments of the 2001 CEC Section 700-12(b)(2) into Section 700.12(B)(2) of the 2004 CEC.}*

### **Section 700.12(B)(2) Generator Set.**

The SFM is proposing the adoption by reference the entire Article 701 – Legally Required Standby Systems without SFM amendments.

The SFM is proposing the adoption by reference the entire Article 702 – Optional Standby Systems without SFM amendments.

The SFM is proposing the adoption by reference the entire Article 725 – Class 1, Class 2, and Class 3 Remote-Control, Signaling and Power-Limited Circuits without SFM amendments.

The SFM is proposing the adoption by reference the entire Article 760 – Fire Alarm Systems. The SFM is also proposing to maintain the existing SFM amendments of the 2001 CEC Section 760-1.1 into Section 760.1.1 of the 2004 CEC.

### **Section 760.1.1 Equipment and Systems.**

The actions described above are reasonably necessary to carry out the purpose for which it is proposed. The rationale of these actions is to establish minimum requirements for the prevention of fire and for the protection of life and property against fire and panic in any

building or structure used or intended for use as an asylum, jail, mental hospital, hospital, home for the elderly, children's nursery, children's home or institution, school, or any similar occupancy of any capacity, and in any assembly occupancy where 50 or more persons may gather.

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**TECHNICAL, THEORETICAL, AND EMPIRICAL STUDY, REPORT, OR SIMILAR DOCUMENTS:**

(Government Code Section 11346.2(b)(2))

The SFM did not rely on any technical, theoretical, and empirical study, report, or similar documents outside of the 2002 NEC in proposing that CBSC adopt said model code as a reference standard for the placement of SFM's existing regulatory amendments of the 2001 California Electrical Code.

**CONSIDERATION OF REASONABLE ALTERNATIVES**

(Government Code Section 11346.2(b)(3)(A))

The SFM has determined that no alternative considered would be more effective in carrying out the purpose for which the regulation is proposed or would be as effective and less burdensome to affected private persons than the proposed adoption by reference with SFM amendments.

The CBSC has recommended that the 2002 Edition of the NEC be used by all proposing state agencies as the basis for the 2004, CEC. Therefore, there are no alternatives available to the SFM regarding the proposed adoption of an electrical code.

**REASONABLE ALTERNATIVES THE AGENCY HAS IDENTIFIED THAT WOULD LESSEN ANY ADVERSE IMPACT ON SMALL BUSINESS.**

(Government Code Section 11346.2(b)(3)(B))

The CBSC has recommended that the 2002 Edition of the NEC be used, as the bases of the 2004 CEC, therefore there were no alternatives offered to the SFM regarding which model code was to be used as the foundation for the placement of the SFM's existing 1998 CEC amendments.

Therefore, no alternatives have been identified or that have otherwise been identified and brought to the attention of the SFM that would lessen any adverse impact on small business.

**FACTS, EVIDENCE, DOCUMENTS, TESTIMONY, OR OTHER EVIDENCE OF NO SIGNIFICANT ADVERSE**

**IMPACT ON BUSINESS.**

(Government Code Section 11346.2(B)(4))

The SFM has made an initial determination that this proposed action will not have a significant adverse economic impact on business. Health and Safety Code Section 18928 requires the SFM, when proposing the adoption of a model code, national standard, or specification shall reference the most recent edition of the applicable model code, national standard, or specification. Therefore, there are no other facts, evidence, documents, testimony, or other evidence on which the SFM relies to support this rulemaking.

**DUPLICATION OR CONFLICTS WITH FEDERAL REGULATIONS**

(Government Code Section 11346.2(b)(5))

The SFM has determined that this proposed rulemaking action does not unnecessary duplicate or conflict with federal regulations contained in the Code of Federal Regulations that address the same issues as this proposed rulemaking.

**ESTIMATE OF COST OR SAVINGS**

- ◆ Cost or Savings to any state agency: **NO**
- ◆ Cost to any local agency required to be reimbursed under Part 7(commencing with Section 17500) of Division 4: **NO**
- ◆ Cost to any school district required to be reimbursed under Part 7 (commencing with Section 17500) of Division 4: **NO**
- ◆ Other nondiscretionary cost or savings imposed on local agencies: **NO**
- ◆ Cost or savings in federal funding to the state: **NO**

**INITIAL DETERMINATION OF NO SIGNIFICANT STATEWIDE ADVERSE ECONOMIC IMPACT ON BUSINESSES**

The initial determination of the SFM is that the proposed regulatory action will not have a significant, statewide adverse economic impact directly affecting businesses, including the ability of California businesses to compete with businesses in other states.

**FINDING OF NECESSITY FOR THE PUBLIC'S HEALTH, SAFETY, OR WELFARE**

The SFM has made an assessment of the proposed code changes and has determined that these changes do not require a report.

## **DECLARATION OF EVIDENCE**

The State Fire Marshal has not relied on any facts, evidence, documents, testimony, or other evidence to make its initial determination of no statewide adverse economic impact on businesses.

## **COST IMPACT ON PRIVATE PERSON OR BUSINESS**

The SFM is not aware of any cost impacts that a representative private person or business would necessarily incur in reasonable compliance with the proposed action.

## **ASSESSMENT OF EFFECT OF REGULATIONS UPON JOBS AND BUSINESS EXPANSION, ELIMINATION OR CREATION**

The SFM has assessed that adoption of these regulations will not:

- ◆ Create or eliminate jobs within California;
- ◆ Create new businesses or eliminate existing businesses within California; or
- ◆ Affect the expansion of businesses currently doing business within California.

## **INITIAL DETERMINATION OF SIGNIFICANT EFFECT ON HOUSING COSTS**

The SFM has made an initial determination that this proposal may affect housing costs. The SFM has not considered alternatives.

## **STAFF FINDINGS**

The State Fire Marshal adopted the California generated Article 89 in the 1998, Part 3, Title 24, therefore, the SFM does not need to show all the article 89 text underlined. Showing the text underlined gives the impression that the text, in underline format, is all new. This also allows the public to comment on any or all of the existing Article 89 text.

A simple statement that the article being proposed for adoption along with any specific amendments shown underlined or stricken, as was shown in the ISOR, would be sufficient to meet the requirements of the Administrative Procedures Act.

A      AA      D      FS

\*   \*   \*  
(END OF ITEM)

## **ITEM 11-1 – Committee Recommendations**

## **Part 4**

### **California Mechanical Code**



ITEM 12 [PEME]  
 OSHPD 2/02  
 Part 4  
 Section 203-A, 316.5, 407.2, 407.4, 410.0, 602.1, 1131.0 & Table 4-A

## EXPRESS TERMS

### ITEM 12-1

#### CHAPTER 2 – DEFINITIONS

##### 203 – A

**AIR, OUTSIDE**, is air from outside the building....

**AIR, RELIEF** [For OSHPD 1, 2, 3, & 4] is air being exhausted directly from a building or a return duct system which is not contaminated by odors or other contaminants and could otherwise be used as return air if not exhausted from the building.

**AIR, RETURN**, is air being recirculated....

#### Notation

**Authority:** Health & Safety Code Sections 1226, 1275, 129790 and 129850 and Government Code Section 11152.5

**Reference:** Health & Safety Code Section 129850

#### ITEM 12-1 – Committee Recommendations

A	AA	D	FS

\* \* \*  
 (END OF ITEM)

### ITEM 12-2

#### CHAPTER 3 – GENERAL REQUIREMENTS

##### SECTION 316.0 – ESSENTIAL MECHANICAL PROVISIONS [FOR OSHPD 1, 2 & 4]

During periods of power outages emergency electrical power shall be provided for the following equipment:

**316.1** All heating equipment necessary to maintain a minimum temperature of 60°F (15.6°C) in patient areas which are not specified in Table 315.

**316.2** All heating equipment necessary to maintain the minimum temperatures for sensitive areas as specified in Table 315.

**316.3** Equipment necessary for humidification of the areas listed in Table 315.

**316.4** All supply, return and exhaust fans required to maintain the positive and negative air balances as required in Table 4-A.

**316.5** All control components and control systems necessary for the normal operation of equipment required to have emergency electrical power.

#### Notation

**Authority:** Health & Safety Code Sections 1226, 1275, 129790 and 129850 and Government Code Section 11152.5

**Reference:** Health & Safety Code Section 129850

#### ITEM 12-2 – Committee Recommendations

A	AA	D	FS

\* \* \*  
 (END OF ITEM)

### ITEM 12-3

#### CHAPTER 4 – VENTILATION AIR SUPPLY

##### 407.2 Outdoor air intakes and exhaust outlets.

**407.2.1 Outdoor air intakes.** Outdoor air intakes shall be located at least 25 feet (7.62 m) from exhaust outlets of ventilating systems, combustion equipment stacks, medical-surgical vacuum systems, cooling towers and areas that may collect vehicular exhaust or other noxious fumes. The bottom of outdoor air intakes shall be located as high as practicable, but not less than 10 feet (3048 mm), above ground level. If installed through above the roof, they shall be located 18 inches (457 mm) above roof level or 3 feet (914 mm) above a flat roof where heavy snowfall is anticipated.

....

**407.2.2 Exhaust outlets.** Exhaust outlets shall be located a minimum of 10 feet (3048 mm) above adjoining grade and 10 feet (3048 mm) from doors, occupied areas and operable windows.

**Exception:** Negative-pressure isolation rooms shall comply with Section 414.1.

**407.2.3 Relief Air Discharge.** Building relief air discharge shall discharge at least 10 feet (3048 mm) from any outside air intake

**Notation**

**Authority:** Health & Safety Code Sections 1226,1275,129790 and 129850 and Government Code Section 11152.5

**Reference:** Health & Safety Code Section 129850

**ITEM 12-3 – Committee Recommendations**

A      AA      D      FS

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(END OF ITEM)

**ITEM 12-4****407.4 Air circulation.**

**407.4.1** Air shall be introduced at the cleanest areas and removed at the dirtiest areas in order to reduce ~~changes~~ chances of airborne cross infection as follows:

**407.4.1.1** Air supplied to ....

**407.4.1.2** Room supply air outlets....

**407.4.1.3** Corridors shall not be used to convey supply, ~~air to or return or exhaust air to or from any room. except to ventilate small rooms [30 square feet (2.79 m<sup>2</sup>) or less] which are mechanically exhausted, such as bathrooms, toilet rooms and janitors' closets opening directly on corridors.~~

**EXCEPTION 1:** Small rooms [30 square feet (2.79 m<sup>2</sup>) or less] which are mechanically exhausted, such as bathrooms, toilet rooms and janitors' closets opening directly on corridors.

**EXCEPTION 2:** Air transfer caused by pressure differentials in rooms required to have a positive or negative air balance by Table 4-A.

**407.4.1.4** No space above a ceiling may be utilized as an outside-air, supply-air, exhaust-air or return-air plenum.

**EXCEPTION:** Designs specifically approved by the enforcing agency.

**407.4.1.5** Air from a patient room, exam room, or treatment room shall not be transferred to another similar room without first having passed through air filters as required by Table 4-B.

**407.4.1.6** Supply air outlets shall be a sufficient distance from return and exhaust inlets to prevent short-circuiting of supply air into the space.

**Notation**

**Authority:** Health & Safety Code Sections 1226,1275,129790 and 129850 and Government Code Section 11152.5

**Reference:** Health & Safety Code Section 129850

**ITEM 12-4 – Committee Recommendations**

A      AA      D      FS

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(END OF ITEM)

**ITEM 12-5****410.0 – LABORATORIES [FOR OSHPD 1, 2, 3, & 4]**

**410.1** The minimum amount of outdoor air in laboratories shall be provided in accordance with Table 4-A. A filter with 90 percent average efficiency shall be installed in the air-supply system at its entrance to the media transfer room.

**410.2** Laboratory hoods for general use shall have a minimum average face velocity of 75 feet per minute (380 m/s). Hoods in which infectious or highly radioactive materials are processed shall have a face velocity of 100 feet per minute (510 m/s) ~~and each shall have an independent exhaust system with the fan installed at the discharge point of the system.~~

Bacteriological safety cabinets used for processing infectious materials shall have an average face velocity of 50 to 70 feet per minute (255 m/s to 355 m/s) and shall be equipped with a means for disinfection.

**410.3** Laboratory hoods shall not be connected to the general building exhaust system. Hoods in which infectious or highly radioactive materials are processed each shall have an independent exhaust system with the fan installed at the discharge point of the system. Duct systems serving ~~fume~~ laboratory hoods shall be constructed of stainless steel of a type which will resist corrosion by materials normally handled. Duct systems serving ~~fume~~ laboratory hoods used for purposes other than those needed for routine diagnostic laboratory procedures and in which highly radioactive materials or a significant volume of highly oxidizing agents are used shall be constructed of USS 18-8 stainless steel or the equivalent for a minimum distance of 10 feet (3048 mm) from the hood. Such ducts shall be equipped with wash

down facilities and shall be consistent with fire safety requirements.

**410.4** The exhaust from all laboratory hoods in which infectious or radioactive materials are processed shall be equipped with filters having a 99 percent efficiency based on the DOP (dioctyl phthalate) test method. Filter frames shall be durable and carefully dimensioned, and shall provide an airtight fit with the enclosing duct work. All joints between filter segments and the enclosing duct work shall be gasketed or sealed to provide a positive seal against air leakage.

#### Notation

**Authority:** Health & Safety Code Sections 1226,1275,129790 and 129850 and Government Code Section 11152.5

**Reference:** Health & Safety Code Section 129850

#### ITEM 12-5 – Committee Recommendations

A	AA	D	FS

\* \* \*  
(END OF ITEM)

#### ITEM 12-6

##### CHAPTER 6 – DUCT SYSTEMS

**602.1 General.** Supply air, return air and outside air for heating, cooling or evaporative cooling systems shall be conducted through duct systems constructed of metal as set forth in Tables 6-1, 6-2 and 6-3 or metal ducts complying with U.M.C. Standard No. 6-2 or the referenced HVAC Duct Construction Standard in Chapter 16, Part II with prior approval. Ducts, plenums and fittings may be constructed of asbestos cement, concrete, clay or ceramics when installed in the ground or in a concrete slab, provided the joints are tightly sealed.

Corridors shall not be used to convey air to or from rooms if the corridor is required to be of fire-resistive construction per the Building Code.

**Exception 1:** *[For OSHPD 1, 2, 3 & 4] In health facilities, air from corridors may be used as makeup air to ventilate small rooms of 30 square feet (2.79 m<sup>2</sup>) or less which are mechanically exhausted, such as bathrooms, toilet rooms, janitor closets, and electrical or telephone closets opening directly onto corridors.*

**Exception 2:** *[For OSHPD 1, 2, 3 & 4] Air transfer caused by pressure differentials in rooms required to have a positive or negative air balance by Table 4-A.*

Concealed building spaces....

#### Notation

**Authority:** Health & Safety Code Sections 1226,1275,129790 and 129850 and Government Code Section 11152.5

**Reference:** Health & Safety Code Section 129850

#### ITEM 12-6 – Committee Recommendations

A	AA	D	FS

\* \* \*  
(END OF ITEM)

#### ITEM 12-7

##### CHAPTER 11 – REFRIGERATION

**1131.0 Location.** Cooling towers, evaporative condensers and fluid coolers shall be located such that their plumes cannot enter occupied spaces. Plume discharges shall be at least five (5) feet (1524 mm) above or twenty (20) feet (6096 mm) away from any ventilation inlet to a building. Location on the property shall be as required for buildings by the Building Code.  
**1131.1** *[For OSHPD 1, 2, 3 & 4] Plume discharge shall be at least twenty-five (25) feet (7620 mm) from any ventilation inlet to a building.*

#### Notation

**Authority:** Health & Safety Code Sections 1226,1275,129790 and 129850 and Government Code Section 11152.5

**Reference:** Health & Safety Code Section 129850

#### ITEM 12-7 – Committee Recommendations

A	AA	D	FS

\* \* \*  
(END OF ITEM)

**TABLE 4-A --PRESSURE RELATIONSHIP AND VENTILATION REQUIREMENTS FOR GENERAL ACUTE CARE HOSPITALS, SKILLED NURSING FACILITIES, INTERMEDIATE CARE FACILITIES, CORRECTIONAL TREATMENT CENTERS, OUTPATIENT FACILITIES AND LICENSED CLINICS**

A	B	C	D	E	F
AREA DESIGNATION	AIR BALANCE RELATIONSH IP TO ADJACENT AREAS <sup>8</sup>	MINIMUM AIR CHANGES IF 100% O.S.A.	CONDITIONED AIR NOT 100% O.S.A.		ALL AIR EXHAUSTE D DIRECTLY TO OUTDOORS
			Minimum Air Changes of Outdoor Air per Hour	Minimum Total Air Changes per Hour	
Operating room, cardiac cath lab and cystoscopy	P <sup>7</sup>	12	5	20	--
Patient holding preparation <sup>1</sup>	E	6	2	6	--
Delivery room	P	12	5	20	--
Nursery	P	8	3	12	--
Recovery	E	6	2	6	Yes
Intensive/coronary care <sup>9</sup>	P	6	2	6	--
Emergency department:					
Waiting area	N	<del>40</del> 12	2	<del>40</del> 12	Yes <sup>2</sup>
Operating room	P	12	5	20	--
Treatment room	E	6	2	6	--
Trauma room <sup>3</sup>	P	12	5	20	--
Patient room	E	2	2	4 6	--
Patient area corridor	E	2	2	4	--
Labor/delivery/recovery room	E	2	2	4 6	--
Negative-pressure isolation room	N <sup>4</sup>	12	2	12	Yes
Negative-pressure isolation anteroom	P <sup>4</sup>	10	2	10	Yes
Positive-pressure isolation room	P <sup>5</sup>	15	2	15	--
Positive-pressure isolation anteroom	N <sup>6</sup>	15	2	15	--
Treatments, and examination rooms	E	6	2	6	--
Bronchoscopy and endoscopy	N	12	2	12	Yes
Special purpose room (SNF & ICF only)	E	6	2	6	Yes
Imaging:					
X-ray (diagnostic and treatment)	E	6	2	6	--
CT Scan	E	6	2	6	--
MRI room	E	6	2	6	--
Fluoroscopy room	N	6	2	6	Yes
Dark room	N	12	2	12	Yes
Negative-pressure x-ray room	N	12	2	12	Yes
Gamma camera	E	6	2	6	--
Bedpan room	N	--	--	10	Yes
Bathroom	N	--	--	10	Yes
Janitors' closet	N	--	--	10	Yes
Sterilizer equipment room	N	--	--	10	Yes
Substerile room	E	10	2	10	Yes
Linen and trash chute rooms	N	--	--	10	Yes

Food preparation centers	E	10	2	10	Yes
Dining room	E	10	2	10	--
Dishwashing room	N	--	--	10	Yes
Dietary day storage	E	--	--	2	--
Laundry, general (clean and dirty)	E	10	2	10	Yes
Soiled linen sorting and storage	N	--	--	10	Yes
Clean linen storage	P	2	2	2	--
Anesthesia storage	E	8	--	8	Yes
Central medical and surgical supply:					
Soiled or decontamination room	N	4	2	4	Yes
Clean workroom	P	4	2	4	--
Unsterile supply	E	2	2	2	--
Pharmacy/medicine room	P	2	2	4	--
Laboratory					
General	N	6	2	6	--
Biochemistry	P	6	2	6	--
Cytology	N	6	2	6	Yes
Glass washing	N	10	2	10	Yes
Histology	N	6	2	6	Yes
Microbiology	N	6	2	6	Yes
Nuclear medicine	N	6	2	6	Yes
Pathology	N	6	2	6	Yes
Serology	P	6	2	6	--
Sterilizing	N	10	2	10	Yes
Media transfer	P	4	2	4	--
Infectious disease and virus	N	6	2	6	Yes
Bacteriology	N	6	2	6	Yes
Negative-pressure treatment/exam room	N	12	2	12	Yes
Physical therapy and hydrotherapy	N	6	2	6	--
Soiled workroom (utility room)	N	4	2	10	Yes
Clean workroom	P	4	2	6	--
Autopsy	N	12	2	12	Yes
Toilet room	N	--	--	10	Yes
Shower room	N	--	--	10	Yes
Waiting Area Primary care clinic	N	10	2	10	Yes <sup>2</sup>

<sup>1</sup>The pressure relationship of the entire emergency department shall be negative to other adjacent areas.

<sup>2</sup>Air may be recirculated if a high-efficiency particulate air (HEPA) filter with a minimum efficiency of 99.97 percent is installed in the return air duct which serves the waiting area.

<sup>3</sup>The term "trauma room" as used here is the operating room space in the emergency department or other trauma reception area that is used for emergency surgery. The first aid room and/or "emergency room" used for initial treatment of accident victims may be ventilated as noted for the "treatment rooms."

<sup>4</sup>The anteroom shall have positive air pressure in relation to the negative-pressure isolation room. A door louver, transfer grille, or other acceptable means shall be provided to allow for airflow from the anteroom to the negative pressure isolation room. The negative-pressure isolation room shall have negative pressure in relation to the anteroom, and the adjoining toilet room shall have negative pressure in relation to the negative-pressure isolation room. Negative pressure shall be achieved by balancing the exhaust cfm to no less than 75 cfm (35.4 L/s) greater than the supply cfm. The overall area consisting of the anteroom, negative-pressure isolation room, and adjoining toilet room shall have an equal air pressure in relation to the corridor.

**EXCEPTION:** For correctional treatment centers, the location and design of the air transfer device shall not compromise the

safety, security and protection of staff, inmates, and property.

<sup>5</sup>Positive-pressure shall be achieved by balancing the supply cfm to not less than 75 cfm (35.4 L/s) greater than the exhaust and return cfm.

<sup>6</sup>The anteroom shall have negative air pressure in relation to the positive-pressure isolation room. A door louver, transfer grille, or other acceptable means shall be provided to allow for airflow from the positive pressure isolation room to the anteroom. The positive-pressure isolation room shall have positive-pressure in relation to the anteroom and adjoining toilet room. Positive pressure shall be achieved by balancing the supply cfm to not less than 75 cfm (35.4 L/s) greater than the exhaust and return cfm. The overall area consisting of the anteroom, positive-pressure isolation room, and adjoining toilet room shall have an equal air pressure in relation to the corridor.

**EXCEPTION:** For correctional treatment centers, the location and design of the air transfer device shall not compromise the safety, security, and protection of staff, inmates, and property.

P = Positive                      E=Equal                      N=Negative

<sup>7</sup>Cystoscopy may have equal air balance relationship to adjacent areas when approved by authority having jurisdiction.

8. For operating rooms, cardiac catheterization labs, angiography rooms, cystoscopy rooms, delivery rooms, intensive care units, and nurseries provide approximately 15% excess supply air to the room or a sufficient quantity of excess supply air to maintain an appropriate positive air balance based on the room tightness and number of doors. For nonsensitive rooms requiring either a positive or negative air balance, provide approximately 10% differential CFM between supply and return/exhaust airflow but not less than 25 CFM differential shall be provided regardless of room size. Room function, size, and tightness may be considered when determining the differential airflow required

9 Intensive care patient rooms, which contain toilet or bedpan washing fixtures within the room, shall be provided with a minimum of 75 CFM of exhaust directly over the toilet or bedpan washing fixtures.

## INITIAL STATEMENT OF REASONS

### **SUBJECT: VARIOUS PROVISIONS FOR HEALTH CARE FACILITIES AND AN EDITORIAL CHANGE**

The Administrative Procedure Act (APA) requires that an Initial Statement of Reasons be available to the public upon request when rulemaking action is being undertaken. The following information required by the APA pertains to this particular rulemaking action:

#### **STATEMENT OF SPECIFIC PURPOSE AND RATIONALE:**

##### **Section 203 – A**

**Purpose:** The current code does not recognize the difference between exhaust air which is contaminated with odors and other contaminants and building relief air which is not contaminated. To require 25 feet separation between clean relief air discharge and outside air intakes is excessive and adds unnecessary cost and restrictions to some projects.

**Rationale:** To recognize the difference between the exhaust air which is contaminated and building relief air which is not contaminated.

##### **Section 316.5**

**Purpose:** Equipment control systems must also have emergency power supplied to them if they serve any equipment that is required to be provided with emergency power by Section 316. Without the controls being on emergency power, equipment that is required to be on emergency power will not function properly.

**Rationale:** To provide emergency power to the control system of equipment that is required to be connected to the emergency power.

##### **Section 407.2.1**

**Purpose:** The current code language only requires outside air intakes that penetrate through the roof to have a minimum clearance dimension above the roof itself. However, for roof mounted air handlers, outside air intakes are mounted directly on the air handling equipment (above the roof) and do not pass through the roof, thus the minimum clearance from the roof is not enforceable. Both the 1999 ASHRAE Applications Handbook Ch.7 (page 7.2) and the 1996-97 AIA Guidelines for Design and Construction of Hospital and Health Care Facilities Section 7.31.D3 (page 50) clearly require all outside air intakes on central systems to have a minimum clearance above the roof, not just those that pass through a roof. To keep dirt and contaminants on the roof from entering outside air intakes less than 18" above the roof, pre-filters could be installed on outside air intakes to preserve air quality

**Rationale:** To keep dirt and contaminants on the roof from entering outside air intakes less than 18" above

the roof.

##### **Section 407.2.3**

**Purpose:** The current code requires building relief air to be discharged at least 25 feet away from outside air intakes because the code does not distinguish between dirty, contaminated exhaust air and clean relief air which is not contaminated and could otherwise be used as return air in the building. Requiring 25 feet separation between clean building relief air discharges and outside air intakes is excessive and adds unnecessary costs and restrictions to some projects.

**Rationale:** Requiring 25 feet separation between clean building relief air discharges and outside air intakes is excessive and adds costs and restrictions to some projects.

##### **Section 407.4.1**

**Purpose:** Existing California amendment used the term "changes." This is a typographical error, and should read "chances."

**Rationale:** Correct a typographical error in the existing amendment.

##### **Section 407.4.1.3**

**Purpose:** Rooms requiring either a positive or negative air balance per Table 4-A inherently cause airflow either into or out of the corridor which serves that room. When the room is directly served by a corridor requiring fire resistive construction, this creates a conflict between CMC Table 4-A and Sections 407.4.1.3 and 602.1 which prohibit the corridor from conveying air to or from a room when the corridor is of fire resistive construction. This exception will clarify that airflow required by CMC Table 4-A to establish a positive or negative air balance is not to be construed as a code violation. "Return" is added to "supply air" and "exhaust air," since the transfer of return air also is not allowed. Also, a part of the text was editorially changed to an exception, with no change in meaning or application.

**Rationale:** This exception will clarify that airflow required by CMC Table 4-A to establish a positive or negative air balance is not to be construed as a code violation.

##### **Section 407.4.1.5**

**Purpose:** Air should not be transferred directly from one room to another room in patient areas of health facilities. Requiring any transferred air to be properly filtered will greatly minimize the risk of spreading germs and illness throughout the building.

**Rationale:** Requiring any transferred air to be properly filtered will greatly minimize the risk of spreading germs and illness throughout the building.

##### **Section 407.4.1.6**

**Purpose:** When supply and return air registers are located such that air is directed to return path without

circulating in the room short-circuiting will occur. Short-circuiting of supply air reduces the effectiveness of the ventilation required by CMC Table 4-A. Current code language does not prohibit such short-circuiting of supply air.

**Rationale:** Short-circuiting of supply air reduces the effectiveness of the ventilation required by CMC Table 4-A.

#### **Section 410**

**Purpose:** The current code language requiring a separate exhaust system for lab hoods is poorly worded and is subject to differing interpretations. The wording in CMC 410.2 states "... each (hood) shall have an independent exhaust system." The code clearly states that each hood shall have an independent exhaust system, but it does not make clear what it is to be independent of. The most common interpretation is that lab exhaust hoods shall be independent of the general building exhaust system. Another interpretation is that when multiple lab hoods are installed, each lab hood shall have an exhaust system independent of the other hoods.

**Rationale:** Laboratory exhaust hoods shall be independent of the general building exhaust system.

#### **Section 602.1**

**Purpose:** Rooms requiring either a positive or negative air balance per Table 4-A inherently cause airflow either into or out of the corridor which serves that room. When the room is directly served by a corridor requiring fire resistive construction, this creates a conflict between CMC Table 4-A and Sections 407.4.1.3 and 602.1 which prohibit the corridor from conveying air to or from a room when the corridor is of fire resistive construction. This exception will clarify that airflow required by CMC Table 4-A to establish a positive or negative air balance is not to be construed as a code violation.

**Rationale:** This exception will clarify that airflow required by CMC Table 4-A to establish a positive or negative air balance is not to be construed as a code violation.

#### **Section 1131.1**

**Purpose:** Current clearance of 20 feet required by CMC 1131.1 is in conflict with CMC 407.2.1 which requires 25 feet clearance.

**Rationale:** This will clarify a conflict between two sections of the code.

#### **Table 4-A**

**Purpose:** Footnote 8 added to provide a minimum requirement for positive or negative air balances. Footnote 9 added to require exhaust air over a toilet or bedpan-washing fixture in Intensive Care Units. Number of air changes for ventilation is increased for emergency department waiting room, patient room and

labor/delivery/recovery (LDR) room.

**Rationale:** Table 4-A currently requires a positive or negative air balance in several rooms, but there is no minimum requirement to establish this positive or negative air balance. If the differential between the supply and return or exhaust air is not sufficient, the required pressure relationship may not be achieved. Toilet fixtures in intensive care units are often not in a separate room, but are located in the patient space. Exhaust air over the toilet or bedpan fixture is necessary to prevent odors from being returned to the Intensive Care Unit air handling system. This amendment will capture most of the odor from the toilet and exhaust it, while allowing the majority of the room air to be returned to the air handler.

This amendment is intended to coordinate the requirements of Table 4-A with the AIA Guidelines for the Design and Construction of Hospital and Health Care Facilities

#### **TECHNICAL, THEORETICAL, AND EMPIRICAL STUDY, REPORT, OR SIMILAR DOCUMENTS:**

The Office of Statewide Health Planning and Development has not relied on any technical, theoretical or empirical studies, reports or similar documents. The proposed modifications are minor technical clarifications and editorial changes.

#### **CONSIDERATION OF REASONABLE ALTERNATIVES**

There are no reasonable alternatives to many of the proposed modifications. Some proposed modifications are intended to present alternatives to the current code requirements that are considered unnecessarily burdensome. Other modifications have alternatives that would be prohibitively expensive.

#### **REASONABLE ALTERNATIVES THE AGENCY HAS IDENTIFIED THAT WOULD LESSEN ANY ADVERSE IMPACT ON SMALL BUSINESS.**

The proposed modifications are primarily minor technical clarifications and editorial changes that will not impose an adverse impact on small business.

#### **FACTS, EVIDENCE, DOCUMENTS, TESTIMONY, OR OTHER EVIDENCE OF NO SIGNIFICANT ADVERSE IMPACT ON BUSINESS.**

The proposed modifications are primarily minor technical clarifications and editorial changes that will have no significant adverse impact on businesses.



### **ESTIMATE OF COST OR SAVINGS**

- ◆ Cost or Savings to any state agency: Minor savings or costs to state agencies as the proposals relate to new construction of state hospitals, Correctional Treatment Centers governed by the Department of Corrections and the California Youth Authority, and Department of Veteran's Affairs Health Care Facilities.
- ◆ Cost to any local agency required to be reimbursed under Part 7(commencing with Section 17500) of Division 4: None
- ◆ Cost to any school district required to be reimbursed under Part 7 (commencing with Section 17500) of Division 4: None
- ◆ Other nondiscretionary cost or savings imposed on local agencies: None
- ◆ Cost or savings in federal funding to the state: None

Estimate: The proposed modifications may result in very minor costs or savings for the new construction of health facilities as identified above.

### **INITIAL DETERMINATION OF NO SIGNIFICANT STATEWIDE ADVERSE ECONOMIC IMPACT ON BUSINESSES**

The OSHPD has made an initial determination that the amendment of this regulation will not have a significant statewide adverse economic impact on businesses, including the ability of California businesses to compete with business in other states.

### **DECLARATION OF EVIDENCE**

The scope of the proposed modifications is minor, including technical clarifications and coordination changes. The OSHPD has not relied on any facts, evidence, documents, testimony, or other evidence to make its initial determination that there will be no significant statewide adverse economic impact on businesses.

### **FINDING OF NECESSITY FOR THE PUBLIC'S HEALTH, SAFETY, OR WELFARE**

No report is required for this regulation; therefore identification of findings is not applicable to this proposal.

### **COST IMPACT ON REPRESENTATIVE PRIVATE PERSON OR BUSINESS**

This proposal may result in minor increase or savings in the cost of new construction of health facilities.

### **ASSESSMENT OF EFFECT OF REGULATIONS UPON JOBS AND BUSINESS EXPANSION, ELIMINATION OR CREATION**

The OSHPD has assessed whether or not and to what extent this proposal will affect the following:

- ◆ The creation or elimination of jobs within the State of California.

The proposed regulations will have no effect on the creation or elimination of jobs within the State of California.

- ◆ The creation of new businesses or the elimination of existing businesses within the State of California.

The proposed regulations will have no effect on the creation or elimination of existing businesses within the State of California.

- ◆ The expansion of businesses currently doing business with the State of California.

The proposed regulations will have no effect on the expansion of businesses currently doing business with the State of California.

### **INITIAL DETERMINATION OF SIGNIFICANT EFFECT ON HOUSING COSTS**

The OSHPD has made an initial determination that this proposal would not have a significant effect on housing costs.

### **STAFF FINDINGS**

None

## **Part 5**

# **California Plumbing Code**

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## EXPRESS TERMS

### SUB-ITEM 13-1

TABLE 4-2

Space	Lavatories <sup>2</sup>	Scrub Sinks <sup>2</sup>	Toilets	Tubs or Showers	Service Sinks <sup>2</sup>	Clinic Sinks <sup>4</sup>
Doctors' Dressing, General	1 <sup>5</sup>		1			
Nurses' Dressing, General	1 <sup>5</sup>		1			
Surgery and Delivery Suite		2 <sup>6</sup>			1	
Doctors' dressing	1 <sup>5</sup>		1	1 Shower		
Nurses' dressing	1 <sup>5</sup>		1	1 Shower		
Clean-up rooms	1					
Emergency Surgery, Cystoscopy, Cath. Lab. and Special Procedure Room,		1 Each <sup>7</sup>			1	
Anesthesia Workroom	1					
Exam/Treatment Rooms	1					
Nursing Service Space: Patient toilet and bath facilities <sup>20</sup>	1:8 patients <sup>8</sup>		1:6 patients	1:12 patients <sup>21</sup>		
Kitchen and Food Servicing Areas	1				1	
Labor Rooms	1		1 <sup>17</sup>	1 <sup>17</sup>		
Laundry, Soiled Sorting	1					
Morgue	1				1	
Negative-pressure Isolation Rooms <sup>10</sup>	2 <sup>10</sup>		1 <sup>10</sup>	1 <sup>10</sup>		
Nurses' Stations <sup>9</sup>	1					
Physical Therapy	1					
Positive-pressure Isolation Rooms <sup>10</sup>	2 <sup>10</sup>		1 <sup>10</sup>	1 <sup>10</sup>		
Post anesthesia Recovery	1					1
Radiographic Suites	1		1 <sup>11</sup>			
Utility Room, Clean <sup>9</sup>	1					
Utility Room, Soiled <sup>9</sup>	1					1 <sup>12</sup>
Nursery Exam/Workrooms	1					
Nurseries; Well Newborn Intensive Care Intermediate Care	1:6 Bassinets 1:4 Bassinets 1:4 Bassinets					
Intensive Care Units <sup>13</sup>	1:6 Beds		1 <sup>14</sup>			1
Coronary Care Unit	1:1 Patient Room		1 <sup>14</sup>			1
Dialysis Units	1:8 Stations		1 <sup>14</sup>		1	1
Dialysis Isolation Room	1					
Central Supply and Sterilization	1 <sup>8</sup>				1	

Laboratories	1 <sup>8</sup>				1	
Medicine Rooms <sup>9, 16</sup>	1 <sup>8</sup>					
Nursing Unit				1 <sup>15</sup>	1	
Occupational Therapy	1 <sup>8</sup>					
Patient Pantries	1 <sup>5</sup>					
Pharmacy	1 <sup>8</sup>					

<sup>1</sup> Separate toilet facilities shall be provided for the use of patients, staff personnel and visitors.

<sup>2</sup> Fixtures shall be equipped without aerators. The water discharge point shall be 127 millimeters (5 inches) above fixture rim and be equipped with hot-and cold-water supplies not requiring direct contact of the hands for operation (wrist or elbow blades are not acceptable). Sensor operated fixtures may be used, provided they are either battery operated or connected to the ~~critical branch of the~~ essential electrical system.

<sup>3</sup> Each department shall be served by a service closet equipped with a service sink. Departments may share service closets provided the departmental services are compatible. The fixtures listed cannot be shared.

<sup>4</sup> Clinic sinks shall be rim flushing with integral 3-inch (76 mm) trap in which the upper portion of a visible trap seal provides a water surface, and shall be equipped with flushometer valve and hot-and cold water supplies.

Exception: Clinic sinks are not required for chemical dependency recovery hospitals.

<sup>5</sup> Conventional spouts and controls on hot-and cold-water supplies are acceptable. Aerators are not permitted.

<sup>6</sup> a. A minimum of two scrub sinks shall be provided in a surgical unit containing one operating room. Four scrub sinks shall be provided in surgical units containing two operating rooms. One additional scrub sink shall be provided per each additional operating room.

b. A minimum of two scrub sinks shall be provided in a delivery unit containing one delivery room. One additional scrub sink shall be provided for each additional delivery room.

<sup>7</sup> The scrub sink is in addition to the required number for surgeries.

<sup>8</sup> Conventional controls on hot-and cold-water supplies are acceptable. The water discharge points shall be 127 millimeters (5 inches) above the fixture rims and equipped without aerators.

<sup>9</sup> Includes rooms or areas within coronary-and intensive-care units and post anesthesia recovery rooms.

<sup>10</sup> The following fixtures shall be provided in isolation rooms of hospitals only:

a. Within an adjoining toilet room, a lavatory, a shower containing a seat or a space for a shower chair, and water closet equipped with bedpan flushing attachment with a vacuum breaker.

b. A sink equipped per Note 2 within a separate anteroom.

Exception: Chemical dependency recovery hospitals.

<sup>11</sup> A toilet room with lavatory shall adjoin each fluoroscopy room.

<sup>12</sup> The clinic sink may be deleted if all bedrooms in the nursing unit are provided with adjoining toilets with bedpan flushing devices.

Exception: Chemical dependency recovery hospitals are not required to provide bedpan-flushing devices.

<sup>13</sup> Includes burn treatment and respiratory-care units.

<sup>14</sup> The water closet must be equipped for both staff and patient use if only one water closet is provided.

<sup>15</sup> Minimum of one tub room per floor on nursing units provided skilled nursing or intermediate care services.

<sup>16</sup> If a separate medicine room is provided, the room shall be equipped with a sink in addition to the nurses' station sink. Hot-water supplies are optional.

<sup>17</sup> One toilet with lavatory and one shower may serve more than one labor room.

<sup>18</sup> Chemical dependency recovery hospitals are only required to provide lavatories equipped per Note 2 for exam rooms and kitchens. All other fixtures may be equipped per Note 5.

<sup>19</sup> The following fixtures shall be provided in isolation rooms of correctional treatment centers only:

a. Within an adjoining toilet area, a lavatory, a shower containing a seat or a space for a shower chair, and water closet equipped with bedpan flushing attachment with a vacuum breaker.

b. A sink equipped per Note 2 within a separate anteroom.

<sup>20</sup> Fixtures serving individual patient rooms shall not be considered as meeting the required ratios for bedrooms not served by individual adjoining toilet or bathrooms.

<sup>21</sup> A minimum of one bathtub is required on each floor of an acute care or acute psychiatric hospital providing skilled nursing or intermediate care services.

**ITEM 13-1 – Committee Recommendations**

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(END OF ITEM)

## SUB-ITEM 13-2

### CHAPTER 6 – WATER SUPPLY AND DISTRIBUTION

#### Section 612.0 [For OSHPD 1, 2, 3 & 4] Domestic Hot-water Distribution Systems for Health Facilities and Clinics.

**612.1** The domestic hot-water-heating equipment....

**612.2** At least two pieces of ~~hot~~-water-heating equipment shall be provided to supply hot water for dishwashing and minimum patient services such as hand washing and bathing. Booster heaters for 125 F. to 180 F. (52 C. to 42 C.) water are acceptable as a second piece of equipment for dishwashing. Where storage tanks are separate from the water heater, at least two independent storage tanks shall be provided.

**612.3** Instantaneous heaters are permitted....

Notation

Authority: Health & Safety Code Sections 1226, 1275, 129790 and 129850 and Government Code Section 11152.5

Reference: Health and Safety Code Section 129850

#### ITEM 13-2 – Committee Recommendations

A      AA      D      FS

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(END OF ITEM)

## SUB-ITEM 13-3

### CHAPTER 9 – VENTS

#### 906.0 Vent Termination

**906.1** Each vent pipe or stack shall....

**906.2** Each vent pipe shall terminate not less than ten (10) feet (3084 mm) from, or at least three (3) feet (914 mm) above any openable window, door, opening, air intake, or vent shaft, nor less than three feet (3) feet (914 mm) in every direction from any lot line; alley and street excepted.

**906.2.1 [for OSHPD 1, 2, 3, & 4]** Each vent pipe shall terminate not less than twenty-five (25) feet (7620 mm) from any air intake or vent shaft.

Notation

Authority: Health & Safety Code Sections 1226, 1275, 129790 and 129850 and Government Code Section 11152.5

Reference: Health and Safety Code Section 129850

#### ITEM 13-3 – Committee Recommendations

A      AA      D      FS

\*   \*   \*  
(END OF ITEM)

### INITIAL STATEMENT OF REASONS

#### VARIOUS PROVISIONS FOR HEALTH CARE FACILITIES

The Administrative Procedure Act (APA) requires that an Initial Statement of Reasons be available to the public upon request when rulemaking action is being undertaken. The following information required by the APA pertains to this particular rulemaking action:

#### STATEMENT OF SPECIFIC PURPOSE AND RATIONALE:

##### Section 612.2

**Purpose:** This is to clarify that when storage tanks separate from the water heating equipment are provided, at least two separate storage tanks shall be provided, so that during shut down and maintenance of one storage tank, the other one will be operational.

**Rational:** Without this amendment the intent of Section 612.2, which is to have a secondary or a back-up water heating system for periods of shut-down and maintenance, is not met.

##### Section 906.2

**Purpose:** To keep odors and contaminated air away from outside air intakes and vent shafts. The current code language only requires plumbing vents to be 10 feet away from air intake and vent shafts. The 1999 ASHRAE Application Handbook, Chapter 7 and the 1996-97 AIA Guidelines for Design and Construction of Hospitals and Health Care Facilities require greater distances, which are 30 feet and 25 feet respectively.

**Rational:** To keep odors and contaminated air away from outside air intakes and vent shafts.

##### Table 4-2

**Purpose:**  
To coordinate Table 4-2 with other parts of the California Building Standards Code.

Add "Nursing service space: Patient toilet and bath facilities" and explanatory footnotes to coordinate with the California Building Code. Add "Dialysis Isolation Room" to coordinate with the California Building Code. Remove "critical branch of the" from footnote 2 to coordinate with the California Electrical Code.

**Rationale:** The California Building Code contains specific requirements for patient room toilet facilities and dialysis isolation rooms that are not included in Table 4-2.

The emergency electrical system for skilled nursing facilities is not segregated the same as a hospital, and does not have a critical branch system. Removing the term "critical branch" is editorial. The devices will still be required to be on the emergency electrical system, but the California Electrical Code will dictate which branch is appropriate for the type of facility.

These amendments will provide coordination with other parts of Title 24, California Building Standards Code.

#### **TECHNICAL, THEORETICAL, AND EMPIRICAL STUDY, REPORT, OR SIMILAR DOCUMENTS:**

The Office of Statewide Health Planning and Development has relied partially on the 1999 ASHRAE Application Handbook, Chapter 7 and the 1996-97 AIA Guidelines for Design and Construction of Hospitals and Health Care Facilities. The Office has not relied on any other technical, theoretical or empirical studies, reports or similar documents. The proposed modifications are minor technical clarifications and editorial changes.

#### **CONSIDERATION OF REASONABLE ALTERNATIVES**

No alternatives were considered to the proposed modifications. The modifications are technical clarifications and will provide coordination with other codes or standards.

#### **REASONABLE ALTERNATIVES THE AGENCY HAS IDENTIFIED THAT WOULD LESSEN ANY ADVERSE IMPACT ON SMALL BUSINESS.**

The proposed modifications are primarily minor technical clarifications that will not impose an adverse impact on small business.

#### **FACTS, EVIDENCE, DOCUMENTS, TESTIMONY, OR OTHER EVIDENCE OF NO SIGNIFICANT ADVERSE IMPACT ON BUSINESS.**

The proposed modifications are primarily minor technical clarifications that will have no significant impact on businesses.

#### **ESTIMATE OF COST OR SAVINGS**

- ◆ Cost or Savings to any state agency: Insignificant cost to state agencies as the proposals relate to new construction of state hospitals, Correctional Treatment Centers governed by the Department of Corrections and the California Youth Authority, and Department of Veteran's Affairs Health Care Facilities.
- ◆ Cost to any local agency required to be reimbursed under Part 7(commencing with Section 17500) of Division 4: None
- ◆ Cost to any school district required to be reimbursed under Part 7 (commencing with Section 17500) of Division 4: None
- ◆ Other nondiscretionary cost or savings imposed on local agencies: None
- ◆ Cost or savings in federal funding to the state: None

**Estimate:** The proposed action may result in very minor cost for the new construction of health facilities due to increasing the distance between vent pipe terminations and outside air intake openings.

#### **INITIAL DETERMINATION OF NO SIGNIFICANT STATEWIDE ADVERSE ECONOMIC IMPACT ON BUSINESSES**

The OSHPD has made an initial determination that the amendment of this regulation will not have a significant statewide adverse economic impact on businesses, including the ability of California businesses to compete with business in other states.

#### **DECLARATION OF EVIDENCE**

The scope of the proposed modifications is minor, including technical clarifications and coordination changes. The OSHPD has not relied on any facts, evidence, documents, testimony, or other evidence to make its initial determination that there will be no significant statewide adverse economic impact on businesses.

#### **FINDING OF NECESSITY FOR THE PUBLIC'S HEALTH, SAFETY, OR WELFARE**

No report is required for this regulation; therefore identification of findings is not applicable to this proposal.

#### **COST IMPACT ON REPRESENTATIVE PRIVATE PERSON OR BUSINESS**



It is possible that health facilities would see an extremely small increase in the cost of new construction due to increasing the distance between vent pipe terminations and outside air intake openings.

#### **ASSESSMENT OF EFFECT OF REGULATIONS UPON JOBS AND BUSINESS EXPANSION, ELIMINATION OR CREATION**

The OSHPD has assessed whether or not and to what extent this proposal will affect the following:

- ◆ The creation or elimination of jobs within the State of California.

The proposed regulations will have no effect on the creation or elimination of jobs within the State of California.

- ◆ The creation of new businesses or the elimination of existing businesses within the State of California.

The proposed regulations will have no effect on the creation or elimination of existing businesses within the State of California.

- ◆ The expansion of businesses currently doing business with the State of California.

The proposed regulations will have no effect on the expansion of businesses currently doing business with the State of California.

#### **INITIAL DETERMINATION OF SIGNIFICANT EFFECT ON HOUSING COSTS**

The OSHPD has made an initial determination that this proposal would not have a significant effect on housing costs.

#### **STAFF FINDINGS**

None

## **Part 9**

### **California Fire Code**

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## EXPRESS TERMS

*{The proposed amendment below allows Group I, Divisions 1.1, 1.2 and 2 Occupancies to activate an audible fire alarm signal by zones rather than throughout the entire building.}*

### SUB-ITEM 14-1

#### Article 10 – Fire Protection Systems and Equipment

##### SECTION 1006 – Fire Alarm Systems

**1006.2.7.1.1 System Requirements.** Group I, Divisions 1.1, 1.2 and 2 Occupancies shall be provided with an approved manual and automatic fire alarm system in accordance with Section 1006.2.7.1. See also Section 1006.2.12. Smoke detectors shall be provided in accordance with the Building Code as follows:

1. At automatic-closing doors in smoke barriers and one-hour fire-resistive occupancy separations,
2. In waiting areas which are open to corridors.
3. *In-patient sleeping rooms. (See California Building Code Section 308.10a)*

When actuated, alarm-initiating devices shall activate an alarm signal, which is audible throughout the building or in designated portions of the building when approved.

**EXCEPTION:** Visual alarm-signaling devices are allowed to substitute for audible devices in patient use areas.

*[For SFM] In Group I, Division 1.1 Occupancies, audible devices placed in patient areas shall be only chimes or similar-sounding devices for alerting staff.*

Authority Cited-Health and Safety Code Section 13143.  
Reference-Health and Safety Code Section 13143(a).

*{The purpose of the amendment below is to make the regulation consistent with existing SFM regulations of the CBC and CFC that require the patient room smoke detectors to be system detectors and not single station detectors.}*

### ITEM 14-1 – Committee Recommendations

A	AA	D	FS
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\* \* \*  
(END OF ITEM)

### ITEM 14-2

**1006.3.3.3.1 General.** When actuated, fire alarm-initiating devices shall activate an alarm signal, which is audible throughout the building or in designated portions of the building when approved.

**EXCEPTION:** Single-station detectors in dwelling units, rooms used for sleeping purposes in hotel and lodging houses, ~~and patient sleeping rooms in hospitals and nursing homes.~~

Authority Cited-Health and Safety Code Section 13143.  
Reference-Health and Safety Code Section 13143(a).

### ITEM 14-2 – Committee Recommendations

A	AA	D	FS
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\* \* \*  
(END OF ITEM)

## INITIAL STATEMENT OF REASONS

### STATEMENT OF SPECIFIC PURPOSE AND RATIONALE FOR THE PROPOSED AMENDMENT TO THE CFC- SECTION 1006 2.7.1.1:

The specific purpose of this rulemaking effort as a whole is as follows:

- ◆ The proposed language allows Group I, Divisions 1.1, 1.2 and 2 Occupancies to activate an audible fire alarm signal by zones rather than throughout a building. The proposed language is identical to general provisions of existing language found in Section 1006.3.3.3.1 of the Fire Code. However, because Section 1006.2.7.1.1 is a more specific provision, Section 1006.3.3.3.1 does not apply to Group 1.1, 1.2, 2 Occupancies and I.
- ◆ Group I occupancies include some of the largest buildings in California, several of which exceed 2,000,000 square feet in area. Many facilities include multiple adjoining buildings. Section 1006.2.1.2 disallows the use of area separation

walls for defining separate buildings. As the code is presently written, a fire alarm must sound an alarm simultaneously in all areas and all floors of a building, and in all adjoining buildings. The current code requirement does not recognize that health care facilities do not evacuate occupants. Occupants of health care facilities are relocated to safe zones or defended in place. The sounding of a fire alarm throughout a building where evacuation is not required is inappropriate, disruptive and impractical.

Zoning of such systems is consistent with provisions found in NFPA 72, National Fire Alarm Code, Section 3-4.2. The referenced standard requires that "notification zones shall be consistent with the emergency response or evacuation plan for the protected premises. The boundaries of notification zones shall be coincident with building outer walls, building fire or smoke compartment boundaries, floor separations, or other fire safety subdivisions."

NFPA 72, National Fire Alarm Code, Section 3-7.2 further elaborates on this issue while addressing the use of the American National Evacuation Signal. The standard stipulates that the signal shall be restricted to situations where it is desired that all occupants hearing a signal evacuate the building immediately. It shall not be used where, with the approval of the authority having jurisdiction, the planned action during a fire emergency is not evacuation, but relocation, of the occupants from the affected area to a safe area within the building, or their protection in place (e.g. ...health care facilities...).

The actions described above are reasonably necessary to carry out the purpose for which it is proposed. The rationale for these actions is to establish minimum requirements for the prevention of fire and for the protection of life and property against fire and panic in any building or structure used or intended for use as a hospital, hospital, home for the elderly, or any similar occupancy of any capacity.

#### **STATEMENT OF SPECIFIC PURPOSE AND RATIONALE FOR THE PROPOSED AMENDMENT TO THE CFC-SECTION 1006.3.3.3.1:**

The specific purpose of this rulemaking effort as a whole is as follows:

- ◆ The purpose for this proposed change is to make the exception to section 1006.3.3.3.1 consistent with existing SFM amendments in the California Fire Code and California Building Code.

- ◆ The existing requirements of the exception of Article 10, Section 1006.3.3.3.1 are not consistent with those of the SFM in the CBC, Section 308.10a and the requirements of the CFC, Article 10, Section 1006.2.7.1 relating to smoke detectors in patient sleeping rooms. The existing regulations of both of these codes require that patient room smoke detectors shall be system detectors that are interconnected to the building's fire alarm system. It is difficult for the code user to determine the correct design approach due these conflicting regulations. The proposed amendments will clarify the intent and scope of Article 10, Section 1006.3.3.3.1.

The actions described above are reasonably necessary to carry out the purpose for which it is proposed. The rationale for these actions is to establish minimum requirements for the prevention of fire and for the protection of life and property against fire and panic in any building or structure used or intended for use as a hospital, hospital, home for the elderly, or any similar occupancy of any capacity.

#### **TECHNICAL, THEORETICAL, AND EMPIRICAL STUDY, REPORT, OR SIMILAR DOCUMENTS:**

The SFM considered the national standards of the National Fire Alarm Code, NFPA Standard Number 72, 1999 Edition, National Fire Protection Association in the development of this proposed amendment.

#### **CONSIDERATION OF REASONABLE ALTERNATIVES:**

The SFM has determined that no alternative considered would be more effective in carrying out the purpose for which the amendments to the existing regulation is proposed or would be as effective and less burdensome to affected private persons than the adopted regulation.

#### **REASONABLE ALTERNATIVES THE AGENCY HAS IDENTIFIED THAT WOULD LESSEN ANY ADVERSE IMPACT ON SMALL BUSINESS.**

The SFM has determined that this proposed amendment will not have an adverse impact on small business. Therefore, no alternatives have been identified or that have otherwise been identified and brought to the attention of the SFM that would lessen any adverse impact on small business.

#### **FACTS, EVIDENCE, DOCUMENTS, TESTIMONY, OR OTHER EVIDENCE OF NO SIGNIFICANT ADVERSE IMPACT ON BUSINESS.**

The SFM has made an initial determination that the proposed action will not have significant adverse impact

on business

#### **DUPLICATION OR CONFLICTS WITH FEDERAL REGULATIONS:**

The SFM has determined that this proposed rulemaking action does not unnecessary duplicate or conflict with federal regulations contained in the Code of Federal Regulations that address the same issues as this proposed rulemaking.

#### **ESTIMATE OF COST OR SAVINGS**

- ◆ Cost or Savings to any state agency: **None**
- ◆ Cost to any local agency required to be reimbursed under Part 7 (commencing with Section 17500) of Division 4: **None**
- ◆ Cost to any school district required to be reimbursed under Part 7 (commencing with Section 17500) of Division 4: **None**
- ◆ Other nondiscretionary cost or savings imposed on local agencies: **None**
- ◆ Cost or savings in federal funding to the state: **None**

Estimate: **None**

#### **INITIAL DETERMINATION OF NO SIGNIFICANT STATEWIDE ADVERSE ECONOMIC IMPACT ON BUSINESSES**

The State Fire Marshal has made an initial determination that the proposed amendments to the CFC will not have a significant statewide adverse economic impact on businesses, including the ability of California businesses to compete with business in other states.

#### **DECLARATION OF EVIDENCE**

The State Fire Marshal has not relied on any facts, evidence, documents, testimony, or other evidence to make its initial determination of no statewide adverse economic impact on businesses.

#### **FINDING OF NECESSITY FOR THE PUBLIC'S HEALTH, SAFETY, OR WELFARE**

The SFM has determined that this proposed amendment would not require a report; therefore, a finding is not necessary for the health, safety, or welfare of the people of the state that the regulation is applicable to businesses.

#### **COST IMPACT ON REPRESENTATIVE PRIVATE PERSON OR BUSINESS**

The State Fire Marshal is not aware of any cost impacts that a representative private person or business would necessarily incur in reasonable compliance with the proposed action.

#### **ASSESSMENT OF EFFECT OF REGULATIONS UPON JOBS AND BUSINESS EXPANSION, ELIMINATION OR CREATION**

The State Fire Marshal has assessed whether or not and to what extent this proposal will affect the following:

- ◆ The creation or elimination of jobs within the State of California.

These regulations will not effect the creation of or cause the elimination of jobs within the State of California.

- ◆ The creation of new businesses or the elimination of existing businesses within the State of California.

These regulations will not effect the creation of or the elimination of existing business within the State of California.

- ◆ The expansion of businesses currently doing business with the State of California.

These regulations will not effect the expansion of business currently doing business within the State of California.

#### **INITIAL DETERMINATION OF SIGNIFICANT EFFECT ON HOUSING COSTS**

The State Fire Marshal has made an initial determination that this proposal would not have a significant effect on housing costs.

#### **STAFF FINDINGS**

None

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